

# **Icelandic Landscape Character Assessment**

## **Application on Flatey, Iceland**

### **'Methods and approaches'**

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**Landskapskaraktär i Flatey, Island**  
**Metoder och innfallsvinklar**

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## Preface

This is my thesis for my Master Degree in Landscape Architecture at the Swedish University of Agricultural Studies in Alnarp. Already when working with my Bachelor thesis in the third year I choose to focus on landscape scale and then especially analysis and assessments. My B.Sc. thesis was called Landscape analysis in Þistilfirði, North East Iceland. Writing that paper I realized I wanted to know more about working at landscape scale and what methods that can be used to guard and direct changes of the landscapes of Iceland from future development in agriculture, forestation, hydro power, urban sprawl and all other processes that impact the natural appearance we love so much about our country.

The Summer 2007 I took a course called Nordic landscapes - Landscape assessment and landscape planning in the Nordic countries, which had main focus on Landscape Character Assessment and there within specially the Scottish method developed by Scottish Natural Heritage. This course was conducted as a part of a joint NOVA supported project with teachers from five Nordic schools of landscape architecture and landscape planning. There I found my answer! This method could be used in Iceland to help both the public as well as the decision makers to understand the holistic value of the natural landscape. I have therefore chosen to have landscape character as my main topic in the last year of study, supported by GIS technology.

## Acknowledgement

Almost all pictures are from my personal photo album, but few are borrowed from other authors. All pictures with no references are taken by me in Flatey the 18th and 19th of September 2007, but others have place and/or author mentioned in picture-text.

I would like to thank Guðmundur Aðalsteinn Hólmgeirsson (Alli) for taking the time and effort to sail with me and my sister to Flatey to do the field study. Also for being there as company and servitor the time spent on the island and introducing us to the heart of Flatey. This really helped in understanding the feelings locals have for the island and get a glimpse into the old days when people lived and worked in Flatey.

I want to thank Lars G.B. Andersson for all computer support and for hiring me as assistant in GIS course and in that way giving me the opportunity to learn better how the programs are used. Also for arranging that my good hearted supervisor Åsa Ode lended me her office to work in.



## Summary

Following the demands of the European Landscape Convention a methodology has been developed in order to assess and judge character of landscape. The challenge is to look at three acknowledged methods from Scotland, England and Denmark with the aim to identify which parts of the methods that are suitable to use in Icelandic circumstances. This is done both by comparing the methods with a synthesis and by carrying out two methods on the case study area in *Flatey*, a small, flat island near the North coast of Iceland. *Flatey* was inhabited from the 9th century till 1967 when the last annual inhabitants moved to the mainland. Since then the houses have been renovated as summerhouses and are still mostly owned by descendants to the last settlers.

The compared methods are; Landscape Character Assessment, LCA, (Scotland), Historic Landscape Characterisation, HCL, (England) and Landskabet I Kommuneplanlægning (Denmark). While the LCA and the Danish method provides a method that is more general and an overall assessment, the HCL is more focused on the specific where the aim is to integrate smaller studies and measures into an assessment of landscape. This makes the HCL more suitable as a pre-study or a done parallel to the other two. The Danish method shares the same methodology and structure in most parts, which is logical since it is developed based on the LCA method.

For Icelandic conditions it was decided that combining the LCA and the Danish method would provide a suitable method. This was done in a way where the phases and steps of LCA are followed and complemented with the visual analysis technique and evaluation form of "Landskabet i Kommuneplanlægning". Defined elements which are evaluated are borrowed from a Swedish adaptation of LCA (Det Skånska Landsbygdsprogrammet, 2006), but the working process of the Danish method is followed.

This combined method is called Icelandic Landscape Character Assessment. That approach can be used to reveal an objective view on landscape to be used for arguing in favor of landscapes, in development and planning fields.

The ground structure in the combined method is following the process of LCA, starting with collecting data concerning natural, cultural and social factors. Most of these information were collected in GIS format and are therefore analysed and mapped using that program. The desk study also include study of written resources, homepages for local associations and other picture material available. This is used to form a draft of landscape character types and areas, working in different scales.

Field study is a vital and important part of the characterisation. That setting is formed to take in aesthetic aspects and experience gained in field. The material collected can be recorded as; written descriptions, an annotated sketch, checklists, photographs, interviews and other observations.

These pre-studies are used for mapping of character types and areas, with crosschecking of arguments for borders and divisions. When character types and areas have been formed, the notes from field survey are used to identify key characters and further on descriptions of each Landscape Character Type or Area.

The evaluation process is also based on field survey source material. *Visual Quality*, *Integrity*, *Identity*, *Rarity and Entirety* are given grades within each character type/area (unique, high, medium-high, medium and low) in order to point out the most important character elements of each character area. The last step is where decisions are made and guidelines developed. This stage can involve presentation of character divisions for more people and progressive work with planners, entrepreneurs, politicians or local people. That work might even call for reconsideration of evaluation or additional descriptions in order to enable decision maker to take well informed judgement calls.

The input of Icelandic Landscape Character Assessment will give important information for development planning policies at both regional and local level. It provides an input for Environmental Assessments, both at the level of plans and policies as well as for the individual development proposals. It is a significant informing work on special areas where working on identification of areas for designation, justification for special treatment by designation. The character approach should help in accommodating necessary changes with development, without sacrificing local character. An overall knowledge and recognition of landscape character importance, among the population of Iceland, will also develop respect for the landscape and its resources.

## Samanfattning

I enlighet med den Europeiska Landskapskonventionen har en metod utarbetats för att analyser och bedöma landskapets karaktär för en Isländsk kontext. Den utvecklade metoden har applicerats på två olika skalor för ett område i norra Island, Flatey. Flatey är en liten och platt ö vilken var befolkad från 1000-talet till 1967 då de sista invånarna flyttade till fastlandet. Sedan dess har husen blivit renoverade och fungerar idag som sommarhus för ättlingarna till de sista bofasta.

Metoden har baserats på en genomgång av existerande landskapskaraktäriserings metoder från Storbritannien där delar som passerat för Island har identifierats. De metoder som har studerats och jämförts är: Landscape Character Assessment, LCA, (Storbritannien), Historic Landscape Characterisation, HCL, (Storbritannien) and Landskabet I Kommuneplanlægning (Denmark). LCA och den danska metoden är båda mer generella metoder som gör övergripande analyser för landskapet. Den danska metoden delar till stora delar samma övergripande metodologi och struktur som LCA, vilket är logiskt eftersom den är baserad på LCA metoden. Detta till skillnad från HCL vilken är mer fokuserad på det specifika där syftet är att integrera mindre studier och åtgärder i en mer övergripande landskapsanalysen. HCL är därmed mer lämpad som en förstudie eller som en studie som görs parallellt med LCA och den danska studien.

En kombination av LCA och den danska metoden bedömdes vara mest lämplig för en isländsk kontext och kom att utgöra grunden för den utvecklade metoden. Detta genom att komplettera de olika delarna av LCA med den visuella analys teknik och fältformulär som utarbetats i ”Landskabet i Kommuneplanlægning”. Denna kombinerade metod kallas här Icelandic Landscape Character Assessment och kan användas för att ge en objektiv beskrivning av landskapet för att ha ett landskapsperspektiv i utveckling och planering av landskap.

Grunden för den kombinerade metoden följer processen av LCA och börjar med en skrivbordsstudie. För appliceringen på Flatey börjar det med insamlande av data för naturliga, kulturella och sociala faktorer. Det mesta av informationen samlades in med hjälp av GIS och har analyserats och presenterats i ArcGIS. Denna del av studien inkluderade även insamling och genomgång av skrivet material, bilder, och hemsidor för lokala föreningar. Detta material användes för att identifiera utkast av landscapskaraktästyper och områden på två olika skalor.

Fältstudier är en viktig del i processen för karaktärisering och syftar till att fånga in estetiska aspekter och upplevelser i fält. Materialet kan samlas in som skriftliga beskrivningar, sketcher med noteringar, checklistor, fotografier, intervjuer och andra observationer. I fält används även de preliminära kartorna med identifiering av karaktärstyper och -områden, för att i fält checka argumenten för gränsdragningar och uppdelningar.

När karaktärstyper och -områden har definierats används noteringarna från fältstudierna för att identifiera huvudkaraktärsdrag och som stöd för att beskriva varje landskapskaraktärstyp och –område. Begreppen Visual Quality, Integrity, Identity, Rarity and Entirety utvärderas för varje karaktärstyp/område som unik, hög, medium-hög, medium och låg för att peka ut de viktigaste elementen för karaktär.

Det sista steget inbegriper beslut och riktlinjer för framtida utveckling för områdena och kan innefatta presentationer av utvärderas för utvärderas för de identifierade karaktärerna för fler personer och fortsatt arbete med planerare, entreprenörer, politiker och lokalbefolkningen. Denna del kan även inbegripa en omprövning av bedömningen eller en insikt att ytterligare beskrivningar behövs för att få ett bra beslutsunderlag.

Icelandic Landscape Character Assessment kan bidra med att ge viktig information för att utveckla planeringsstrategier på både regional och local nivå. I en miljökonsekvensbedömning kan den bidra med information för planering och strategier och för individuella utvecklingsprojekt. Informationen som erhålls är viktig för att identifiera områden med krav på speciella landskapshänsyn. Landskapskaraktärisering som metod kan vara till stöd för att tillgodose nödvändig utveckling utan att offra den lokala karaktären. En ökning av kunskapen om landskapskaraktär och ett erkännande av dess betydelse bland befolkningen på Island skulle kunna öka respekten för landskapet och dess resurser.

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## Introduction

The need to incorporate landscape considerations into decision-making is not new, but has grown in importance as the emphasis on sustainable development has increased.

The idea of separating classification and descriptions of landscape character (what makes one area different or distinct from another) from landscape evaluation has become more and more acknowledged in landscape analysis.

To describe the character one can not only look at the visual perception, or how we see the land, but also how we hear, smell and feel our surroundings, and the feelings, memories or associations that they evoke. Landscape character, which is the pattern that arises from particular combinations of the different components, can provide a sense of place to our surrounding and form our mental landscape (Swanwick, 2002:3).

In Northern Iceland big areas have depopulated to the degree that the only “use” is in form of summer cottages, besides from grazing sheeps of nearest communities. In Icelandic vocabulary they are named “eyði-jarðir” or deserted land. The ownership of these farms is often very complicated since the living relatives may be dozens and everyone wants its piece of the cake. This has often pushed planners to avoid making decisions for these areas and clarifying the usage and aims.

But, how can the demands for the Landscape Convention be fulfilled in such an area? The demands are further outlined on page 10.

The European Landscape Convention is probably the most significant multinational convention of landscape that’s been made. It emphasizes on landscape as a base for all human activities and quality of life.

It applies to the entire territory of the Parties and relates to natural, urban and sub-urban areas, whether on land, water or sea. It therefore concerns not just remarkable landscapes but also ordinary everyday landscapes and blighted areas (Council of Europe, 2000).

### *Goal of this thesis work*

With my work I want to provide the basis for preparation of landscape management strategies for the area. That will include identification of areas of interest and further on justification for special treatment in management plans.

Focus group: landscape managers (planners, farmers, landowners, entrepreneurs), inhabitants and politicians.

### *Method*

1. Literature studies of three different character methods, including critical discussions and comparison;

- Landscape Character Assessment (LCA) Guidance for England and Scotland. Scottish method.
- Vejledning om LANDSKABET I kommuneplanlægningen. Danish method.
- Using Historic Landscape Characterisation. English method.

2. Case study in project area. Desk study, field study and synthesis.







## The need for solutions

### *Why the landscape scale?*

Landscape is a product of interactions between the physical and natural environment, and social and cultural factors. Landscapes are constantly changing, mostly due to economic and political policies.

Landscape is the product of past change and ever changing perceptions, and because so many of its components are living organisms, it is highly dynamic. It cannot be preserved exactly as it is or restored to former “layout” since change is one of its strongest characteristics as much as it is an impact on it. But saying that change is inevitable part of the landscape is not saying that we should helplessly observe changes. In fact it offers a bigger challenge. Instead of choosing which landscapes we like best and keeping them we are required to look at all landscapes (as the European Landscape Convention insists) and plan for their future shape in the context of social and economic needs as well as public opinion. Defining and accepting landscape character is becoming one of the foundations to manage landscape through spatial planning, development control, agri-environmental policy and raising public awareness (Fairclough, 2007:274-276).

In the European Landscape Convention landscape is defined as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or social factors” (Council of Europe, 2000)

This carefully worded sentence embraces a number of ideas of how one can define landscape by its values. It recognizes the role of human construction and influence on the environment which both possesses a functional and a visual coherence. But more importantly it assumes that a fundamental feature of landscape is its distinctive ‘character’, as a result of complex patterns of actions and interaction which render in both a historical context and contemporary dynamics (Selman, 2006:5-6).

The Landscape Conventions definition of landscape also puts the people in the very centre of landscape, and the words “as perceived by” insists that landscape exists only as a mental or emotional construct of the ‘beholder’ (Fairclough, 2007:271).

For the nations that have signed or/and ratified the European Landscape Convention this means that character assessment and preservation of landscape character becomes a found requirement for planning and development. The Conventions role is to prompt nations to form general legal principles which should serve as a basis for adopting national landscape policies and establishing international co-operation in such matters. Landscape planning have until now mostly been carried out in relations to natural/pristine systems with very limited human imprint, but the Convention gives the new possibilities of preservation of environment defined as cultural landscapes (Council of Europe, 2000; Selman, 2006:6).

“Since the industrialization the change of the landscape has increased and become ever faster. What has been a landscape of industrialization a century ago can become a natural resort today. The slate mining areas of North Wales were the stage for bone braking and dangerous labor, for people slaving in the mines for 12 hours a day with only a break on Sunday to attend the service in the Chapel. The vast spoil heaps, flooded holes and abandoned mines today are a tourist resort and even a UNESCO world heritage site. Perspective changes with the change of technology and the course of history” (Ermischer, 2003).

How one perceives landscape owns its origin in how people orientate themselves. One is influenced by his childhood landscape, the history surrounding and memories as well as physical factors as weather, climate (seasonal heat-changes, annual downfall and wind) and biotopes (birds, animals, vegetation, etc.).

Poverty is often in peoples mind associated with a lack of history. Although Iceland has been settled by men since the beginning of the 9th century, and has had historically interesting times, like when the Vikings ruled and when big writers were born, the more recent history of poverty in the 19th and early 20th century dominates the memory. Therefore many historic structures and buildings are still erased, even during a time of growing interest in ones cultural heritage, because they are viewed as mere testimonies of poverty. Poverty is experienced as shameful and modern wealth shall be shown to the public (Ermischer, 2003).



## Landscape protection in Iceland

Even though Iceland's landscape is within no doubt unique, it has no special place within the Icelandic jurisdiction. Preservation and/or retention of land and landscape are very seldom related to larger areas or landscape wholes.

Landscape protection stands on a weak base in Iceland and has not been considered as immediate here as in neighbouring countries. In some languages the word "landscape" is defined from characteristic factors, where every form and element that can be seen from one point, together make the landscape. In others, including ELC, the definition is based on the one that perceives the landscape. The values of landscape are mostly visual and aesthetic and therefore more difficult to measure and evaluate than cultural heritage or ecological values in the landscape.

The word landscape can be found in three places in Icelandic laws. First to mention is the law nr. 44/1999 about nature conservation, where it originally says that landscape is considered the most important premise for reservation of areas. When the laws were reviewed in 2001 the word landscape was deleted from clause 37 about special protection. It originally covered special protection of certain landscape types but was changed into protection of special earth formations and specific ecosystems. Secondly, the word landscape is mentioned in the 3rd clause of laws for Environmental Impact Assessments, in the definition of the word surrounding. That is, it includes landscape along with other elements. Thirdly the National Heritage Act embraces cultural landscape, both definition and preservation. But still no areas have been categorized as preservable or in need for special treatment. (Náttúruverndaráætlun 2004-2008) Just recently the Icelandic National Planning Agency introduced the outcome of a working committee for definition of the word LANDSCAPE, which was that the European Landscape Conventions definition is most appropriate to use in Iceland. This has though not been published.

## European Landscape Convention

Adopted in Florence, Italy on 20 October 2000, the European Landscape Convention is aimed at promoting the protection, management and planning of European landscapes as well as organising European cooperation on landscape issues. It is the first international treaty to be exclusively concerned with all dimensions of European landscape. It applies to the entire territory of the Parties and relates to natural, urban and sub-urban areas, whether on land, water or sea. It therefore concerns not just remarkable landscapes but also ordinary everyday landscapes and blighted areas. The Convention represents an important contribution to the implementation of the objectives of the Council of Europe, when seeking to protect Europeans' quality of life and well-being, taking into account landscape with cultural and natural values. The member states of the Council of Europe signatory to the European Landscape Convention declared their concern to achieve sustainable development based on a balanced and harmonious relationship between social needs, economic activity and the environment. The cultural dimension is also of fundamental importance (De' Jeant-Pons, 2006).

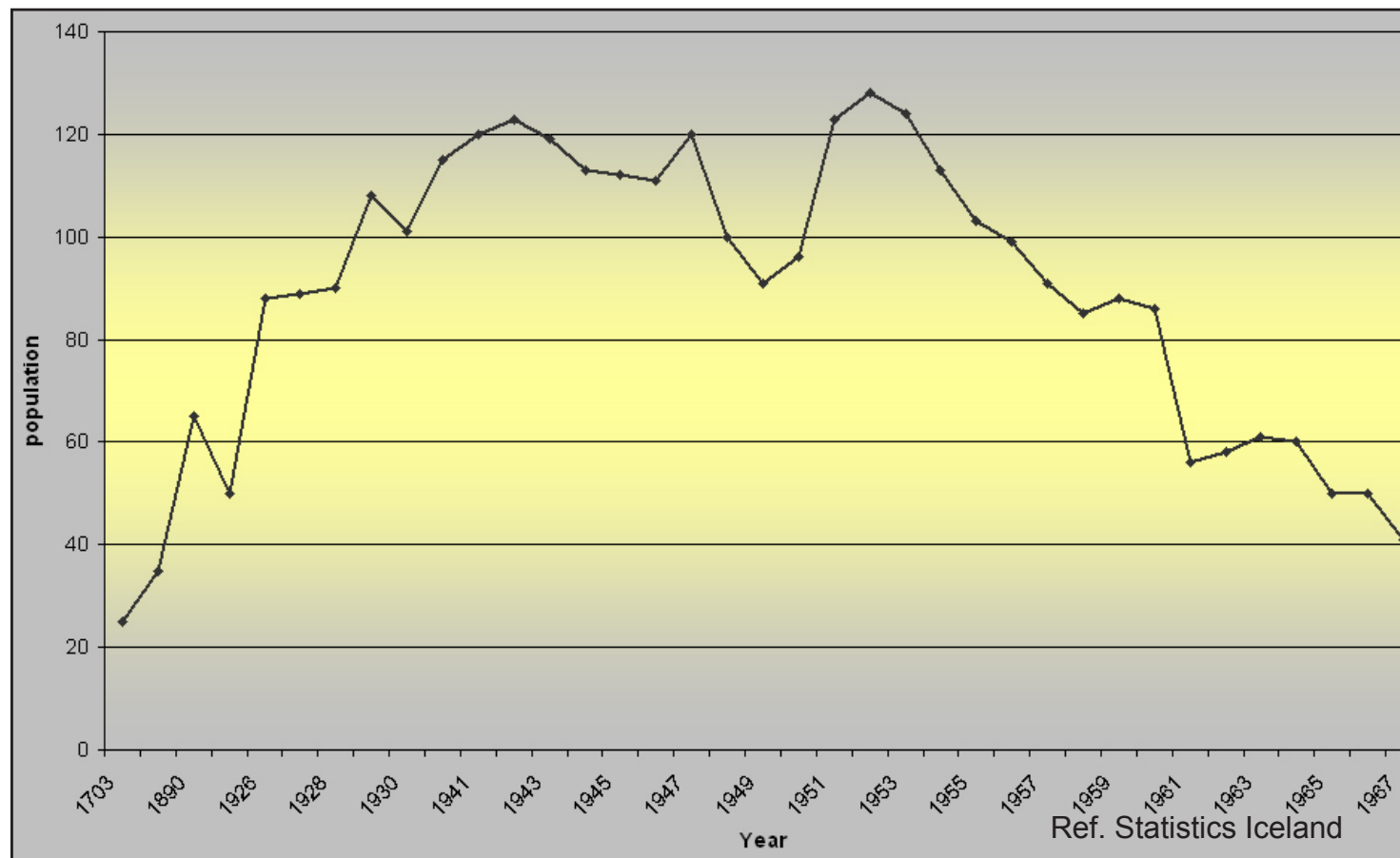
The Contracting nations undertake to implement four general measures:

1. to recognize landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity;
2. to establish and implement landscape policies aimed at landscape protection, management and planning;
3. to establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of landscape policies;
4. to integrate landscape into its regional and town planning policies and in its cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape (Council of Europe, 2000).

The European Landscape Convention is probably the most significant multinational convention of landscape that's been made. It emphasizes on landscape as a base for all human activities and quality of life. In year 2007 the Convention has been signed by 35 nations of which 29 have also ratified. Only 12 European countries have not signed the Convention and Iceland is the only Nordic country that has not put its name on it. Recently the discussions of signing the Convention have been re-opened for the initiative of the association of Landscape Architects in Iceland (Council of Europe, 2000).







## History of Flatey

Flatey is located on the bay Skjálfandi of the North shore of Iceland. As the crow fly distance from fast land is about 2,5 km but the common sailing way from Nautseyri to the harbor of Flatey was in the old days considered “half a week of sea”, which is about 4 km. The island is the size of 262 ha. 2,5 km where it is longest and 1,7 km where it is widest. The island is low, highest point 22 m and all made from diabase rock. Flatey is the fifth largest island around Iceland.

### Settlement

People first settled in *Flatey* in early historic times and the first written references that are known of settlements, is *Reykðelasaga* (written in 9th century) where it is said that a man named *Kálfur*, which was responsible for the dried fish of *Áskell* gothi, lived in *Flatey*. The next reference is *Sturlunga saga* (written in year 1300) which describes when the bishop, *Guðmundur góði* visited the island. About that trip there are also sayings that he blessed a well the inhabitants used which is still visible today and is called *Gvendarbrunnur* (*Gvendar* is a shortening from *Guðmundur* and *brunnur* means a water hole). The story is that 18 people had drowned in that well before the bishop blessed it, but after that not even one lamb has died there (Vilhjálmsdóttir, et.al.1980; Friðriksson, 1977:183).

Written sources ratify that settlement has been continues since the 11th century and the settlements have always been on the south part of the island. *Flatey* was in one property at first but because of the extra resources from down and driftwood, big and rich land owners wanted to own its share. For a long time the island was three properties where the Danish king owned half the island, the church in *Hólar* 1/4th and the convent of *Möðruvellir* 1/4th (Vilhjálmsdóttir, et.al. 1980).

Today the whole island is owned by the Icelandic state, but the houses are owned by living relatives of former inhabitants.

The year 1700 the island was divided into four properties; *Útibær*, *Uppibær* and *Neðribær* all close together in the same field and *Krosshús* in another field. These four farms have been settled and kept their original names since then. A description from around 1900 says that “...the houses were poor and the sitting rooms (*baðstofur*) were not so pleasant since the farmers kept the cows under the floors to heat up the room, so the smell and gases from them was strongest under the roof were people sat with there handcraft. In the summertime it was almost unbearable heat and thick air in there, since it was not a custom to open windows. The front houses (*frambæirnir*) were often a little better than the sitting rooms and lodges and outhouses had wide wind-spoilers and high a-shaped front sides facing south” (Friðriksson, 1977:34).

At this time all the houses were built from stones and turf and easily collapsed in earthquakes. Sources tell about fallen houses after an earthquake in 1260 and that all four houses were destroyed in year 1755 (Sigurðsson, 1954:118).

After 1900 the houses on the island were improved and they also started to increase in number. New farms were built and new fields levelled around them. The first stone house was built in 1921 (*Neðribær*) and year 1950 there was only one turf-house left on the island. The houses were most commonly heated with charcoals, but a few homes had diesel motor or a small wind power station. By then most houses had running water and sewage. After 1960 all houses except two had oil-heating, but only two had water-toilet and no one had electricity (Vilhjálmsdóttir, et.al. 1980).

The first census in Iceland was made in 1703 and then 25 people were registered living in *Flatey*. More then a century later, 1816 the inhabitants were 35. Year 1890 they reached 65 but in 1907 only 50 again. Then the population increased and in 1942 the farms were 15 and there were 120 people living in *Flatey*. That was the top in population and after that the numbers went down each year. In 1967 only 50 people lived on the island and decided to stay over the wintertime in *Húsavík*. Most of them planned to move back in the spring, but as they got to know the safety, social stimulation and joy of a bigger society, none of them went back to live there year around. Since then the island has only been inhabited in the spring when they fish lumpfish and recently more and more of the old houses have been renovated and used as summerhouses (Vilhjálmsdóttir, et.al. 1980).



### *Livelihood and service in Flatey*

Fishing with boats has always been the main foundation for living on the island and therefore good and short connections to the fishing grounds were important. Islanders mostly fished lumpfish in the spring and cod all other parts of the year. In cold years the sea ice could surround the island and prevent the lump fishing at springtime. Islanders also caught other fishes if possible, like halibut, herring and shark.

Before 1900 the fish was mostly dried and sold abroad but since then they started to salt it. About the same time did the inhabitants *Flatey* also started to salt lump fish roe. This was often the only income for many homes, making the people dependant on the market prize for salted fish and fish roe. The fishermen mostly used hand-line to catch with until the 18th century when they got sounding lines for halibut fishing. Nets were not used until after around 1900 for catching lump fish and herring (Vilhjálmisdóttir, et.al.1980).

Until 1907 fishing in *Flatey* were only done from small open rowing boats, most of the times made for two or four people. The first motor driven boat came there in 1907 and they increased in number there over the next years. After 1939 trolleys became common and even boats with deck arrangement.

The harbour on the south side is rather good since there are shallows on both sides which break the rough waves. For a long period there was a floating wooden pier, which often got damaged in heavy storms. The harbour of today was finished in December 1967, same year that the last people moved from the island. Then they dug away part of the stone ridge which was between the open sea and a pond inside of it. There they built a new pier and later on smaller floating piers for smaller boats to lend by. Before, or around 1930 there had also been built a pier with a concrete poles and a wooden deck, straight to south on the middle south coast. That pier had the disadvantage of being very exposed to open sea, making it impossible to have the boats there if it was windy or heavy waves (Vilhjálmisdóttir, et.al.1980).

Agriculture has always been a secondary livelihood in *Flatey*, even though the homes with milk were always considered the richer then the “dry-farms” (þurrabúð). The people living on those dry-farms had also less right when it came to grazing and hay making, and had to gather all there hay yield for the winter from the fast land. When saying secondary it is rather meant that agriculture always came second in priority when something needed to be done. If there were good fishing days, levelling of the fields or drying hays had to wait, so it often was of lesser quality then it could have (Vilhjálmisdóttir, et.al.1980).

Through the centuries islanders had to bring home all goods and supplies from Húsavík which was about 8 kilometers distance to row on a open boat. These were often very dangerous and difficult trips in all kinds of weathers and in thewintertime often impossible for months, due to bad weathers and sea-ice. If those periods got long the food supplies on the island often got really poor and especially cereal, coffie and coal supplies. Then it was not unusual that the inhabitants suffered from scarcity deseaces like scurvy. (Friðriksson 1977:101) Just before 1900 it is known that islanders mostly traded with a shop company called Örum & Wulfs, which sent a ship every summer to *Flatey* with wheat and other necessities. A branch from that shop in *Húsavík* was built in *Flatey* in 1904 and changed the way of living a lot on the island, even though it got strong critics for high prices and for paying little for the fish the islanders sold to them. The local company *Kaupfélag Þingeyinga*, took over the business and improved it, by paying more for the fish and working harder to lower prizes on products they sold. They build a new general store which was in use until the island was depopulated in 1967 (Vilhjálmisdóttir, et.al.1980).

### *Social factors*

Revernd *Árni Jóhannesson* started childrens education in *Flatey*, 1891 with one local teacher. The teaching was done in peoples homes and sometimes with ambulatory teacher. *Jóhannes Bjarnason* supervised all teaching from 1907-1941, and had it in his home untill the year 1929 when a elementary school was built. Many organisations were in *Flatey* in the 19th century, for example assosiation for youth, agriculture, reading and fishing. Also a saving bank was founded in year 1892.

A church has been in *Flatey* since around year 1000 and the parish had considerable estates in the middle ages. It was closed 1897 and the parish church built in *Flateyjardalur*. When the last inhabitants abandend that valley 1953, the church was taken to pieces, shipped to Flatey and rebuilt there (Vilhjálmisdóttir, et.al.1980).







## Theoretical framework and methodology

### THE METHOD OF LANDSCAPE CHARACTER ASSESSMENT (LCA)

#### *Evolution and origin*

Those involved in landscape planning have often been reluctant to work with the visual and perceptual aspects of landscape, as opposed to the specific and often more easily dealt with aspects of land use and management, such as agriculture, forestry, recreation and nature conservation. After landscape architects and planners had worked quite long with landscape analysis focusing on evaluating what makes one landscape better or worse than another, LCA was developed in the mid 80's as a new kind of tool to systematically approach and identify different landscapes. The assessment guidance was issued year 1993 in Scotland and England and in 1997 at least 83% of English counties had carried out the assessments. The proportion is considered even higher today, although the quality of the assessment is variable (Swanwick, 1999:1 *Topic Paper 1* ).

Landscape Character Assessment recognizes the pressures that influence landscape changes including urban expansion, agricultural intensification (farming, forestry) and infrastructure development. The reason is that these activities make and affect the character as much as influences of geology, soils, landform, climate, and flora and fauna (Swanwick, 2002:3).

#### *Uses of LCA*

The LCA has been used in wide range of situations and is likely to increase even more in the future. The most common applications of the method are;

- as an informing input for development plan policies
- studies of development potential, for example to find the best suitable sites for new development areas
- informing the siting, spacing, scale and design conditions for particular forms of development,
- contributing to landscape capacity studies
- an input to Environmental Assessment, both at the level of plans and policies and individual development proposals.

#### *Terms and concepts*

Landscape character is defined as a “...distinct and recognizable pattern of elements that occur consistently in a particular type of landscape” (Swanwick, 2002:9). Combinations of geology and landform, the natural attributes of soils and vegetation, and both the historical and current influences of human land use and settlement create character of particular kind. Character makes each and every part of the landscape distinct, and gives a certain sense of place. Exploring and understanding landscape character of any area require a systematic investigation of all these factors that make and influence a character.

The first stage in Landscape Character Assessment involves identifying, classifying and mapping areas of distinctive character in order to explain what makes one area different from another. This normally results in the identification of one or both of the following:

~ *Landscape character types* are distinct types of landscape that are relatively homogeneous in character. They have generic nature in the way that even though they occur in different areas in different part of the same country, they share broadly same combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement patterns.

~ *Landscape character areas* are “...single unique areas and are the discrete geographical areas of a particular landscape type” (Swanwick, 2002:9). Each character area has its own individual character and identity even though it shares the same generic characteristics as other landscape character types.

To distinct between character areas and character types in the work process, landscape character types have generic names such as; wide river valley or rocky coastland, whilst the landscape character areas have names of specific places Hérað (east Iceland) or Reykjanestá (south-west Iceland).



Scale is a relatively free choice subject when performing the landscape character assessment. The assessment can be applied at a variety of scales – from national and regional scale (typically 1:250,000), to local authority scale (typically 1:50,000 or 1:25,000), or to local or parish scale (1:10,000 or 1:5,000). Ideally, assessments at different scales should fit together as a hierarchy of landscape character types and/or areas, so that each level adds more detail to the one above. The analogy of a camera zooming in, from a distant and broad view to a detailed small scale, is often used to describe this relationship.

*Summary of the process*

Four key principles are central to the understanding and appropriate use of Landscape Character Assessment. They are:

- the emphasis placed on landscape character;
- the division between the process of characterisation and the making of judgements to inform decisions;
- the roles for both objectivity and subjectivity in the process;
- the potential for application at different scales

The process of Landscape Character Assessment has 6 main steps divided in two stages; Characterisation and Making Judgments. The Characterisation stage involves the practical steps of initiating the study which are: identification, classification, maps and descriptions of areas of distinctive character, always with focus on value-free assessment. The stage of Making Judgments however is aimed to inform particular decisions by making judgments about landscape character. This stage accepts more subjective inputs as long as they are made in a systematic and transparent way. The decisions themselves actually lie beyond LCA and will be made by politicians, land owners and other stakeholders, on the basis of the information clarified and presented with Landscape Character Assessment.

PHASE 1: CHARACTERISATION

- Step 1: Defining the scope. This is very important step when forming the task of LCA in order to define its purpose and set the frame for the work. This part will critically influence the scale and level of detail, what resources are required, who and what should be involved and what kind of output is wanted from the study.
- Step 2: Desk study. This part involves studying of background material for the area, both maps and other data that give information to develop a series of map overlays. With assistants from them, draft character types/areas maps can be made as a basis for the field study.
- Step 3. Field Survey. Field data is collected and used to test out and refine the draft characters types/areas. Written descriptions and identification of aesthetic and perceptual qualities are made to add to desk study information. The conditions of current landscape elements are identified.
- Step 4. Classification and description. Here the researcher refines the output of the characterization process categorizing and mapping the landscape studies into landscape character types/areas. This is followed by a clear description of each area including “forces for change” in order to identify key development pressures on the characters.

PHASE 2: MAKING JUDGEMENTS

- Step 5. Deciding the approach to judgments. Continues work to decide the approach and criteria needed to make judges on an informed basis. What information is more vital then another in decision-making processes? Is additional field work required?
- Step 6. Making judgements. The purpose of the assessment, adjustment of the scope and the nature of outputs will affect the approach to making judgements. The main approaches within landscape assessment processes are; landscape strategies, landscape guidelines, landscape capacity and attaching status to landscape.

(Swanwick, 2002:14-15)

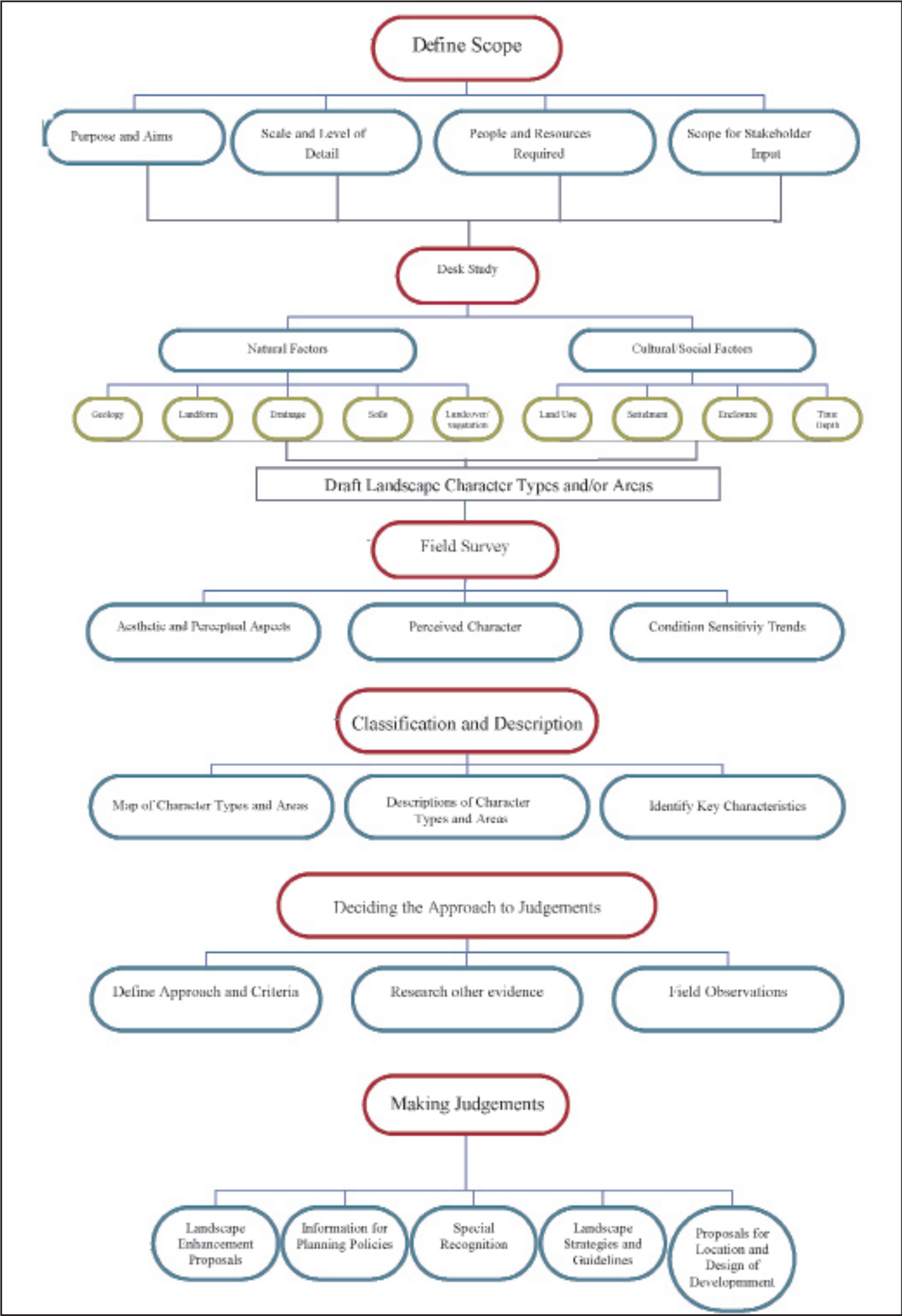


Table 1. Flow diagram of Landscape Character Assessment methodology (Swanwick, 2002:13)

# THE METHOD OF HISTORIC LANDSCAPE CHARACTERISATION (HLC)

## Evolution and origin

Accompanying the Landscape Character Assessment method a parallel freestanding tool has developed which emphasizes on historic landscape and land use, called Historic Landscape Characterisation.

The historic and archaeological aspects of landscape are boundless. Some people draw very limited parts of the past into their mental landscape (even though much what they consider as ‘nature’ or ‘countryside’ is of course modified by humans). Other people acknowledge fields, hedgerows and forms of settlement as a vital part of the landscape and this gradually continues up to the people who “read” layer upon layer of time-depth in the landscape, even things that you know but can not see, like battlefields (Fairclough, 2007:272).

HLC has defined a new territory in spatial historic analysis, using the terms “historic environment” and “heritage” as well as looking in the philosophy of how the historic environment is managed. It is endorsed by the European Landscape Convention and has the aim of sustainability. “If we celebrate the result of past changes, we must logically accept further change,... ..we want landscape to change so that it continues to be cultural, as well as being a dynamic inheritance for our successors” (Clark et.al., 2004:2-3). The method is concerned with the questions of how to protect and manage rural landscape. It has been studying the normal way of protecting by drawing red lines around historic landscape and pointed out the risk that areas outside of the line can be devaluated (Clark et.al., 2004:2).

## General Principles

Historical Landscape Characterisation is a spatial and map-based summary and synthesis of existing knowledge about the history and present historical form and character of the landscape. It is an interpretation but not a description of landscape (Fairclough, 2007:272).

The method of Historic Landscape Characterisation works best at a large scale where broad patterns can be identified that rise above the detail of a place’s distinctiveness. It is mostly desk-study based (GIS) with very little fieldwork, only some early validation in field. This is because the method contains mostly synthesis of existing but unconnected information. Interpretation is an important part of the process and an essential part of the approach is the input of archaeologists with appropriate interpretative skills (Fairclough and Macinnes 2002:6).

The aim of most HLC studies is to characterize the distinctive historic dimension of environment of today, within a given area. Its basic approach is one of classification at area scale, but based on Types not Areas, which facilitates its use alongside Area-based LCA. It results in local areas which can be attributed to one or more historic landscape Types (in layers to reflect time-depth), such as Enclosed fields of various sorts. It classifies settlement, woodland, industrial activity, historic upland and lowland grazing. But most importantly it seeks inter connections between all these aspects both in present and past (Fairclough, 2007:274-5).

## Typical phases

The HLC process is relatively straight forward. It begins with the systematic identification of many of the historic attributes of the contemporary landscape, bot urban and rural. That data gathering is followed by the grouping of attributes into Historic Landscape Character types, mostly determined by their similar land use history. The number of HLC Types can vary depending on the purpose of specific types of analysis, individual project objectives and the landscape encountered. In all cases these types are subdivided and the method has the flexibility to allow further and more detailed characterisation below the subtypes at a more localised scale (Clark et.al., 2004:7-8).

The HLC mapping process is focused upon the historic components of the present-day landscape. So it will not show a map showing former extent of medieval field systems, but instead illustrate where today’s landscape is broadly medieval in origin and in surviving character.

The main product of HLC is character mapping but in addition to this, there are basic reports including description of each Character Type or Zone and its main features (Clark et.al., 2004:9-10).

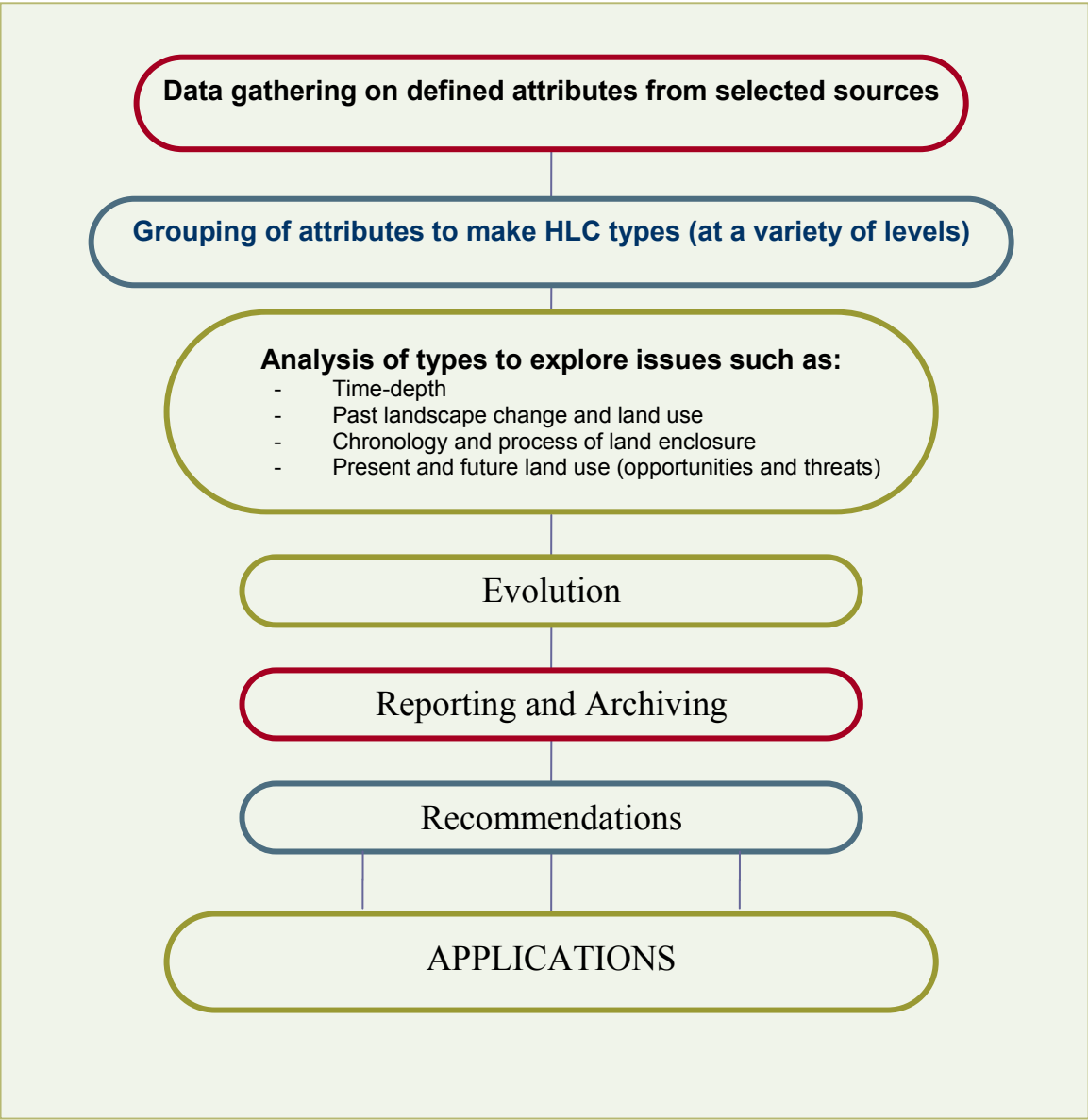


Table 2. Flow diagram of Historic Landscape Characterisation (Clark, et.al. 2004:7)





## THE DANISH METHOD "LANDSKABET I KOMMUNEPLANLÆGNING"

### *Evolution and origin*

The responsibility to conserve landscape value was within the counties in Denmark until the new planning legislation which was taken in action 1. January 2007. Then it was moved to the communities' responsibility and gives them the opportunity to set out goals for structured development in the community and control the balance between development in the urban and rural areas. It is also meant to encourage for conservation of the open landscape in the countryside and also that the open coastlines of Denmark continuously being a public nature- and landscape resource (Miljøministeriet, Skov- og Naturstyrelsen, 2007:5-6).

So the Danes set out a committee to find a tool to answer the thesis; our countryside must accommodate: agriculture and forestry, dwellings, industry, infrastructure, recreation, wildlife etc. *How do we protect and enhance landscape values, diversity and identity?*

The committee was named after Wilhjelm and studied assessment methods from the UK, Germany and Holland, as well as former analyse methods used in Denmark. The committee's aim was to develop a new method for Landscape assessment that was suitable for Danish countryside planning and in line with the European Landscape convention (Nellemann, 2007).

Development and testing were done by: Forest & Landscape, University of Copenhagen  
Danish Forest and Nature Agency, Århus and Fyn Counties, and Svendborg Municipality

The analysis area is a part of the Svendborg municipality in the southern part of the large island of Funen in the middle of Denmark.

### *General principles of the methodology*

The analysis is divided into four phases. Phase 1 consisting of five steps:

#### PHASE 1: MAPPING

Step 1: The landscape analysis begins with a preliminary study of the whole municipality in order to get an overview of the landscape and the existing legal restrictions and planning designations, together with the expected development in the future in view of the existing planning. Factors of special importance will be included at this point.

Step 2: The next step is to make an analysis of the physical geography of the area. This analysis deals with the geomorphology, soil, terrain, water elements, and the relationship between these. In coastal areas, the coast and the surrounding marine areas are included in the analysis, and a preliminary delimitation of the marine foreland is made. The landscape is then divided into regions of similar physical geography with concern to geomorphology, soil, and terrain.

Step 3: The third step is to make a human geographic analysis on the basis of the natural geographic analysis. The landscape of present time is created from the interaction between nature and human use of nature as a resource. Elements and structures such as old buildings, fences, forests, and roads is recognised as having great importance on the character of the landscape. For this analysis, present and historic maps and aerial-photos are used. Literature about the culture geographic development of the area is used to get information about buildings, agricultural use, ownership and ancient monuments.

The elements included in the analysis should not just be present features, but elements that are recognised as important in the landscape. The elements are divided into five categories: vegetation, type of cultivation, development structure, cultural/historical wholes and single elements, and technical installations. Important key functions that are essential for the maintenance of the character are identified. These can for example be agriculture, grazing, forestry, plantation, etc. All evaluations with regard to the cultural geographic analysis are registered in a field chart. In view of the natural geographic regions and the cultural geographic analysis, areas that are homogeneous with regard to the interaction between the dominating landscape elements and the nature are made. These areas form the preliminary landscape character areas.



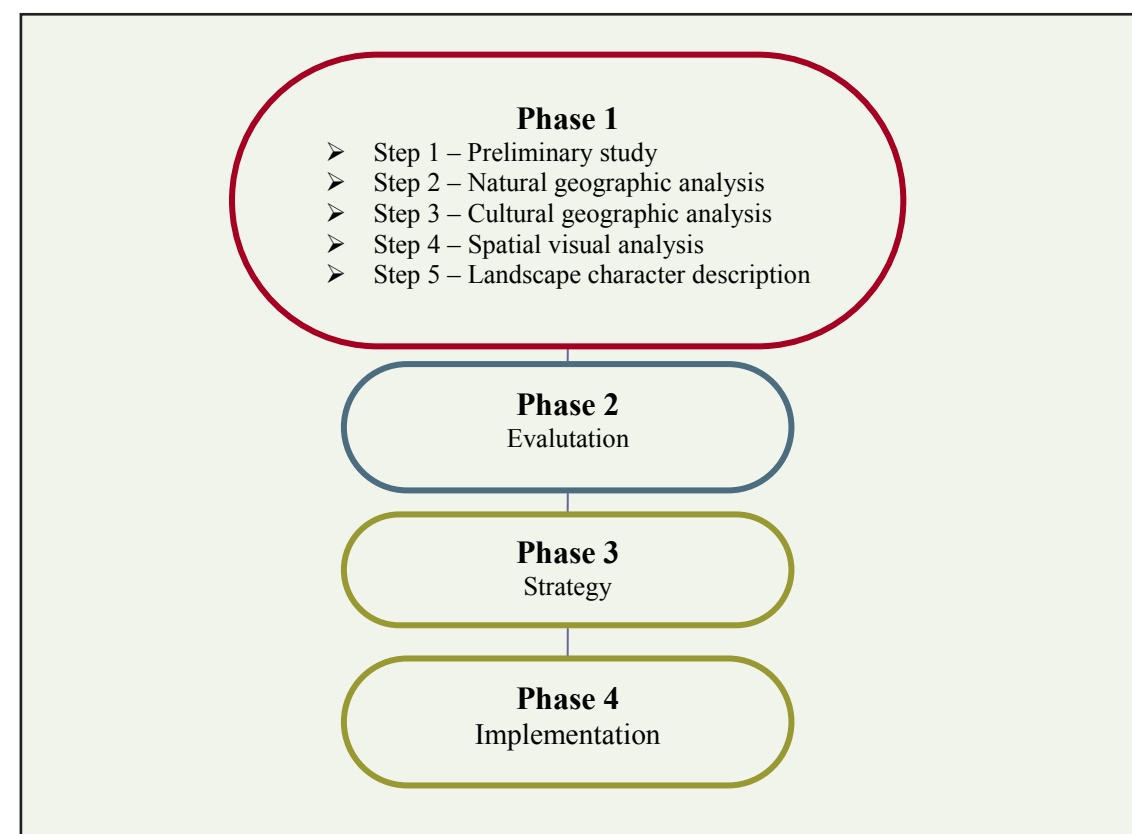
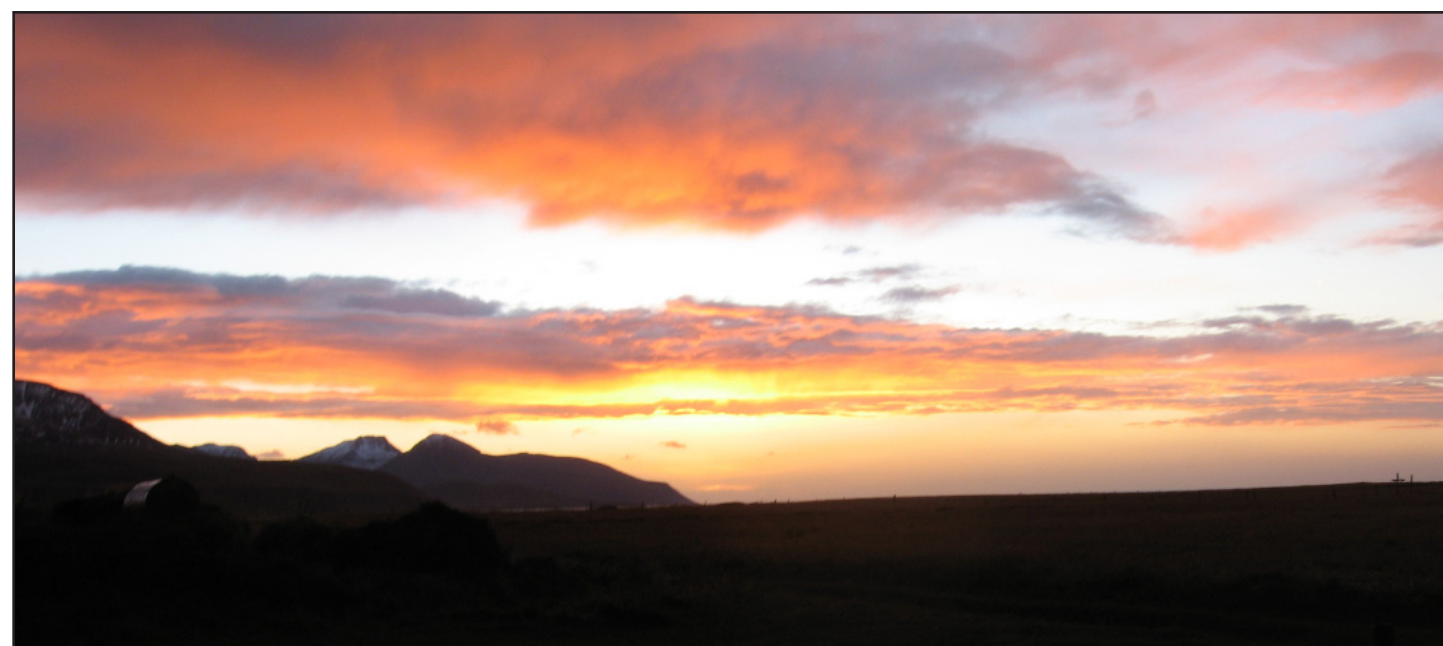


Table 3. Flow diagram of Landskabet i kommuneplanlægning  
(Miljøministeriet, Skov- og Naturstyrelsen, 2007:9)



Step 4: The fourth step is to make a spatial visual analysis of the landscape. This step is made in the field in order to verify the analyses made in the desk study. The analysis is done by driving through each of the preliminary landscape character areas. First, the boundaries between the different character areas are checked and fixed, and then the characterising elements in each area are checked.

The outcome of the spatial visual analysis is a final definition of the landscape character areas, verification and adjustment of data from the natural geographic and the cultural geographic analyses, and mapping and description of the spatial visual conditions of the area. In the view of this, the overall description of the landscape character can be made.

Step 5: In the final step of the mapping phase, the landscape character is described; including what is especially characteristic for the area and distinguishes it from surrounding character areas. The landscape description is the connection between the landscape character mapping (phase 1) and the landscape evaluation (phase 2). The description is made from the field chart supplemented with photos taken in the field. The description should be short, precise and systematic, and should make it possible to compare with descriptions of other landscape character areas.

After describing all the landscape character areas within the municipality, a combined map of the character areas is made. This division of the landscape of the municipality serves as the basis for the evaluation of the landscape and formulation of a landscape strategy (Miljøministeriet, Skov- og Naturstyrelsen, 2007:12-65).

## PHASE 2: EVALUATION

In this part of the landscape character assessment, the landscape is evaluated with regards to the strength, special visually eventful sub-areas, condition, and vulnerability of the landscape character. The evaluation is used as a basis for the management of areas of landscape interest in the landscape strategy of the municipality. Therefore, the evaluation is the link between the descriptions of the character-giving conditions in the mapping of phase 1 and the preparation of a strategy for the landscape (phase 3).

This phase is done in the field, and the evaluations are written in the field chart. After the field study, four maps are made showing the subdivision of the landscape character area into areas characterised by the strength of the landscape character, the presence of special visual experiences, the condition of the landscape character and the vulnerability of the landscape character (Miljøministeriet, Skov- og Naturstyrelsen, 2007:66-97).

## PHASE 3: STRATEGY

In the landscape strategy, a general description of the municipality's landscapes is made. Also, factors of possible special influence to the landscape is described – such as rare geologic terrain structures, nature types, historical buildings or localities, and any planning challenges with regard to the landscape.

In this phase, the mapping and evaluation are used to attach strategic goals for the management to the whole landscape (Miljøministeriet, Skov- og Naturstyrelsen, 2007:98-117).

## PHASE 4: IMPLEMENTATION

The landscape character assessment creates a basis for the municipalities to implement landscape interests in the planning regulations in a homogeneous way. The last phase deals with where and how the landscape interests can be implemented in the rest of the planning.

The specific character of different landscapes is important for the total identity of the municipality, but not all landscapes are equally important. In some areas, the landscape interests must give way to other social interests, such as urban development. But the landscape character assessment can be a way of helping in the decision of, which areas are most important to protect or maintain, and which ones that have a less important character and can therefore be changed (Miljøministeriet, Skov- og Naturstyrelsen, 2007:118-137).



A SYNTHESIS OF DIFFERENT CHARACTER ASSESSMENT METHODS

Comparing different methods

All these analysis methods have in common that they are general. They try to cover all aspects and factors that influence landscape character. Historic Landscape Characterisation emphasis on a slightly simplified view of character factors, whilst the others aim to stress the whole picture and include pre-analysis, such as HLC, in order to do make judgments.

What is common and different between these three methods?

These methods all share a similar ground-structure and work succession. They start with preliminary studies, which feature data gathering on defined attributes, based on the selected sources or the "scope". In LCA and the Danish method, the desk study phase is divided into smaller steps of analysis where different natural, cultural and social factors are looked at individually, like geology, landform, settlement, enclosure etc. The HLC on the other hand works more with an overview of the area based on defined data set and an interpretation of the relationship between relics, land-use, stories and other attributes that are within the category of historic character. This means that the HCL could, as well as being performed separately, be used as a complementary analysis within the frame of the two more comprehensive assessment methods.

The LCA and the Danish method always have the ground approach of describing the landscape without evaluating and categorizing it. This differs from the HCL which clearly states that they are doing "an interpretation not a description of landscape" (Fairclough, G. 2007.page 274). All three methods try to highlight aspects that are hard to measure and to large extent therefore have been overlooked in previous landscape analysis. The HCL base their interpretation on existing knowledge about the history and present historical form and character of the landscape. The LCA and the Danish method have as its basis for describing the landscape aesthetic aspects, perceived character and sensitivity of character.

English Heritage's Historic Landscape Characterisation (HLC) programme has the aim of filling a gap in understanding the long interaction of man with nature. Moving beond individual buildings, ornamental landscapes or archaeological sites, the process establishes an over-arching view of the whole historic landscape. It provides a base map for better appreciation of seperate places, but also offers an overall understanding of the whole (Fairclough, 2001:22).

The Landscape Character Assessment and the Danish method Landskabet i Kommunplanlægning have the same methodology and structure in most parts, which is logical since the Danish one is based on the LCA method. The Danes have though skipped one step which I find as very important and instructive step, that is to end the desk study by forming draft Landscape Character types and/or Areas. There you face the fact of drawing lines and dividing the terrain into types/areas based only on studying computer data and paper material. This gives you the advantage of needing to reason your own decisions later on and therefore it also makes it easier to "change your opinion" about borders or even the character areas further on in the process. This double-checks procedure gives the benefits that all arguments become more concise and every decision is scrutinized.

The Danish method is emphasising two aspects differently then the LCA. First, the Danish method puts much more weight on visual analysis and is providing good descriptions of technique used with detailed instructions. The second is the importance they give evaluating character with the aim to preserve or strengthen the more valuable ones at the same time as allowing development in others. That is in fact a step from the aims of the European Landscape Convention of taking care of all landscape, since a valuation always requires the decisions that one is better or worse landscape in character then another landscape. This can though be avoided in some way by giving only certain elements value, within a character area, but not put a grade on the character area in general. In that way it is up to the decision makers to argue which element is important to consider in future development. The valuation of areas can also be reasoned with the logic that it makes the analysis more multi-usable in planning procedures at comprehensible level.

COMPARISON OF FEW METHOD FACTORS

	LCA	HLC	LANDSKABET
Starting scope	Well defined in beginning	Source selection	Similar for all users of method
Natural factors	Yes	No	Yes
Draft types/ areas	Yes	No	No
Locals input	Yes	No	Not necessarily
Visual analysis	Not systematically	No	Yes
Field Survey	Yes	Yes	Yes
Evaluation	No	Yes	Yes
Aesthetic aspects	Yes	No	Yes within visual analysis
Output	Criteria for making judgements	Applications	Implementation of strategy
Approach	Holistic	Sectional	Holistic







### *Adaptation to Icelandic circumstances*

As mentioned on page 10 Landscape protection stands on a weak base in Iceland and has not been considered as immediate here as in neighbouring countries. Recently the Icelandic National Planning Agency introduced the outcome of a working committee for definition of the word LANDSCAPE, which was that the European Landscape Conventions definition is most appropriate to use in Iceland.

Recently three UK institutions, Oxfordshire County Council, English Nature and the Countryside Agency have started developing a method of linking assessment of a characterisation term, called *Integrated Characterisation*. That is characterisation that gives equal weight to landscape character, ecological character (biodiversity), historic character, the resources of air and water, recreational character and accessibility. Such integrated character may also consider the economic characteristics of farming. This new method is not meant to supersede Landscape Character Assessment or other characterisation strategies but rather will landscape characterisation form one of the segments of integrated characterisation. The final integrated character types and/or areas will reflect the sum of all the key environmental components, not just landscape character. The resulting integrated character types and/or areas therefore are no longer strictly landscape as they include topics outside the domain of landscape, such as air and water quality and recreation provision. They may therefore be more appropriately referred to as Integrated Character Types/Areas or Environmental Character Types/Areas (Swanwick, 1999:7-8, *Topic Paper 1*).

This new way of integrating methods is very promising and gives a more holistic view at landscape and character in certain area. Sectorial assessment is often necessary as a pre-stage, but integrating should follow as a final product. In Iceland the steps before in development and test cases have still not been taken. The methodology of landscape assessment has only been applied for a few years in Iceland with limited people having the knowledge and experience in performing landscape assessments.

A methodology which was also taken into consideration when examining Character Assessment methods is a Swedish approach tested in the region Scania, South Sweden. That method is also based on LCA but compensates it with character elements evaluation, consisting of *Visual Quality, Integrity, Identity, Rarity and Entirety*. The Character Areas are there given grades (unique, high, medium-high, medium and low) to give the idea if one area has more or less quality in character than another (Andersson, 2006:6-10).

In this assessment process in Flatey it was chosen to leave the evaluation section out. First since that method is less developed, and secondly since that the Swedish version has only this one carried out example to support with. No guidance or instruction publication is available, so the synthesis on methodology would have been very limited. The character elements are though taken into the adapted Icelandic methodology rather than the Danish categories, since they are easily understood and adjusted to the process.

To combine the LCA and the Danish method in a way where the phases and steps of LCA are followed but complemented with the visual analysis technique and evaluation form of "Landskabet i Kommuneplanlægning", would give a methodology suitable for an Icelandic context. That approach could be used to reveal an objective view on landscape to be used to arguing in favour of landscapes, in development and planning fields. This assessment strategy would be very useful tool for planning people to reach acceptable conclusions both in the problematic areas like urban sprawl, hydropower projects or depopulated areas as well as in other places that need to strengthen their identification, like nature reserves and mid-Iceland.

The reason for recommending valuation of character areas in Iceland is mostly connected to the goal or "scope" of the assessment. The LCA can be carried out in very different ways, depending on the task which demands the assessment. If planning for new housing quarters one will naturally look at other factors than if related to hydro-power project. Therefore it is more likely to be used by a broad group of people if the assessment gives some kind of value for different factors, for example sensitivity or rarity of landscape character. This approach will also give a good complementation or base-analysis for Environmental Impact Assessments (EIA).



Method used in Flatey

This synthesis of different methods has resulted in a combined method of Landscape Character Assessment and Landskabet i Kommunplanlægning. To make a complete Historic Landscape Characterisation requires more time and effort to collect data and references than is possible within the time-frame given in this project. The data needed is more difficult and more expensive to access then other information used for the assessment. That kind of analysis would also always benefit of a professionals in historical science, like historian or archeologist. HLC is built up to as a sectional analysis working best in big scale and the outcome being used as a factor in a more over gripping and holistic assessment. This is not meant as a critic on the method, on the contrary HLC is found as a well working tool in landscape character mapping, but is skipped in this process since the limited data included could never give a good overview. Therefore it is chosen to leave that analysis out from the field work and combination into maps and graphs, but carry out the other two.

This combined method will be called *Icelandic Landscape Character Assessment*, and carried out in Flatey Skjálfanda as a test case. The ground structure in the combined method will follow the process of LCA, starting with collecting data concerning natural, cultural and social factors. Most of these information are best accessible in GIS format and are therefore analysed and mapped using that program, as well as looking at written resources, homepages for local associations and other picture material available.

Already in this stage of the process it is important to work on more then one scale. Dividing big areas into character types and then difine character areas within each type. If chosen to work further down in scale the character areas are sub-divided into character types, which are then again difined into different character areas. This can be repeated as often as necessary and stopped at any stage as well. This gives room to adopt the method to all landscapes, no matter what size or how complex. Forming the draft character areas/types must always be carried out bearing in mind that these are only first outcast - draft. No decisions needs to be taken at this stage and there is space to move or change borders between types/areas.

Field study is a vital and important part of the characterisation. That setting is formed to take in aesthetic aspects and experience gained in field. This can be recorded in many ways;

- written description of the character observed at particular points,
- an annotated sketch or photographs,
- a checklist of landscape elements and their significant (see Appendix A),
- a checklist of aesthetic and perceptual factors (see Appendix B),
- observations of condition, sensitivity and management (see Appendix B),
- interviews or conversations with locals.

Next step is to combine the desk study with outcome from observations made in field survey, in order to map the character types and areas. Here the draft landscape character map is reviewed based on new information and all arguments for borders reconsidered and crosschecked. At this stage it is possible character types need to be merged together or divided more, all depending on the accumulated knowledge gained with the process. When character types and areas have been formed, the notes from field survey are used to identify key characters and further on descriptions of each Landscape Character Type or Area.

The evaluation process is also based on field survey source material as well as the step before and are there fore often done parallel the descriptions to some degree. *Visual Quality, Integrity, Identity, Rarity and Entirety* are given grades within each character type/area (unique, high, medium-high, medium and low) in order to point out the most important character elements of each character area. Most of the time this evaluation is only done at final stage, i.e. when the final unit of areas are clear. The last step is were decisions are made and guidelines developed. This stage can involve presentation of character divisions for more people and progressive work with planners, entrepreneurs, politicians or local people. That work might even call for reconsideration of evaluation or additional descriptions in order to enable decision maker to take well informed judgment calls.

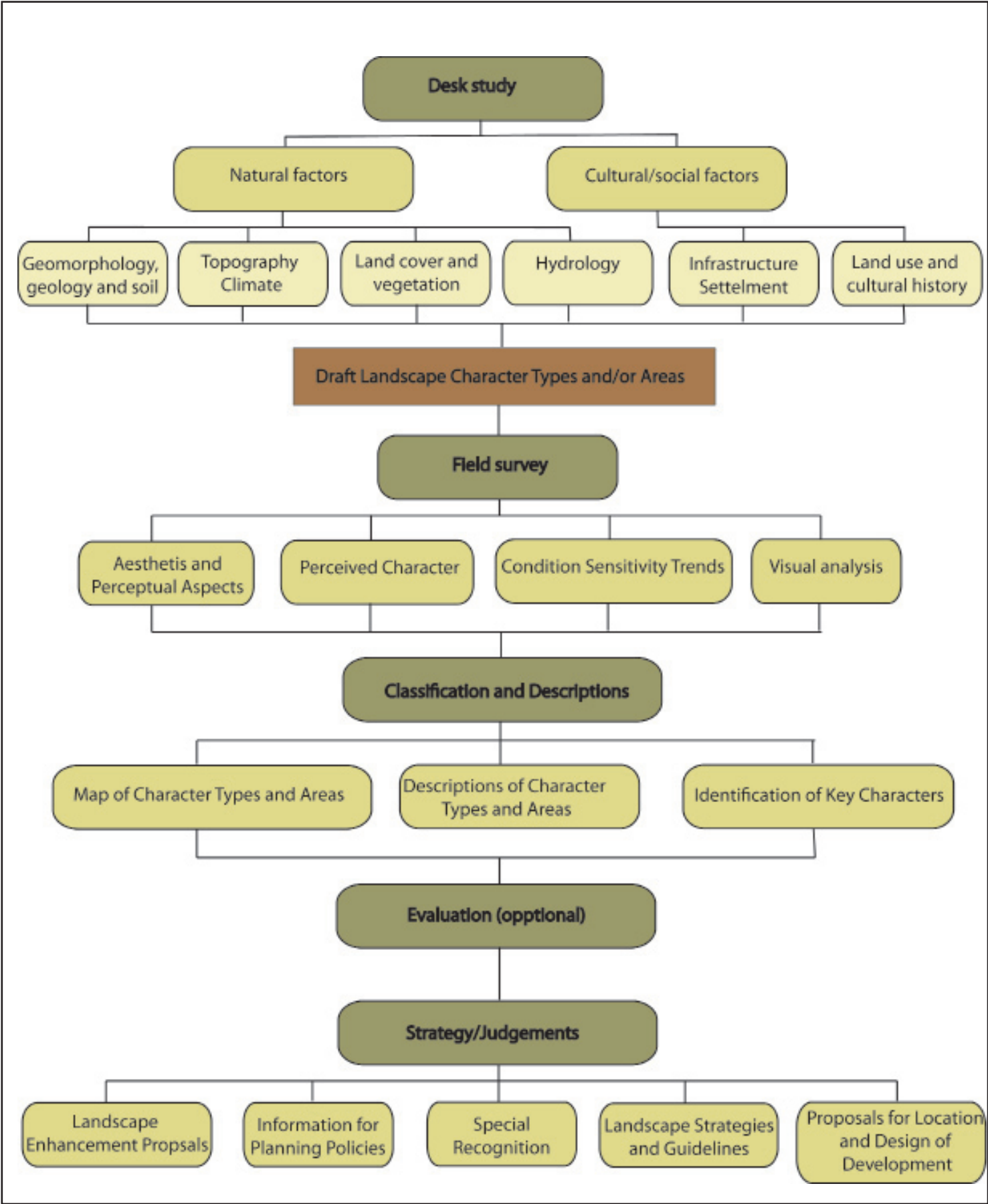


Table 4. Flow diagram of Icelandic Landscape Character Assessment



## Application of Icelandic LCA on Flatey

### *Method applied for Flatey*

The aim of this study is to get an overview of landscape characters in Flatey, in order to have a base material for making management plans for the future.

In this analysis the desk study phase will be shortly presented in map. The maps are showing physical, biological and cultural factors that determine landscape character in the whole area (Flateyjarðalur, Fjörður and Flatey). This is done using GIS manipulation of digital data sets.

The field study source material will be presented in maps and numbers with more weight put on the outcome from these pre-studies, that is the character maps and descriptions.

In this Landscape Character Assessment it has been chosen to combine desk studies and field work to determine and value landscape character of the island Flatey. The desk study includes maps of;

- geomorphology, geology and soil
- topography and climate
- land cover and vegetation
- hydrology and infrastructure
- land use and cultural history
- as well as literature studies of history and status of today

The desk study was done both before and after the field study. Before to get an overview for the area and afterwards to compare results from both phases. The field study was done the 18th and 19th of September 2007.

Landscape character types were defined for the whole area, using height level as main factor in determining borders between different types. The lines of snow-cover and changes in vegetation are following the contour lines and have strong influence on character in this area. The outcome was four different Landscape Character Types;

- Mountain type >460 meters above sea level
- Mountain sides and foothill type, 160-460 meters above sea level
- Lowland type, < 160 meters above sea level
- Flat island type.

Then it was decided to go down in scale for the last type, Flat island type, and identify Character Areas within that Character Type. The overview analysis in the beginning was to put the island in context to the surrounding and show how different in character the island is from the connecting mainland.

The island of Flatey was divided into seven different Character Areas, based mostly on vegetation, land use and topography;

- Miðeyjan, the flat middle part of the island.
- Byggð, the settlement on the south part of the island.
- Tjarnir, four ponds on each "corner" of the island.
- Grjótfjara, rocky shore covering 2/3 of the coastline.
- Krosshúsabjarg, cliffs on East side of the island.
- Mjóí grandí, marsh area on the South side
- Beitningaskúrar, industrial area near the harbor.

This process of mapping the areas was followed up with description of each Character Area as well as identification of key characters. Discussion of future development was done for each area.





# GEOMORPHOLOGY AND GEOLOGY

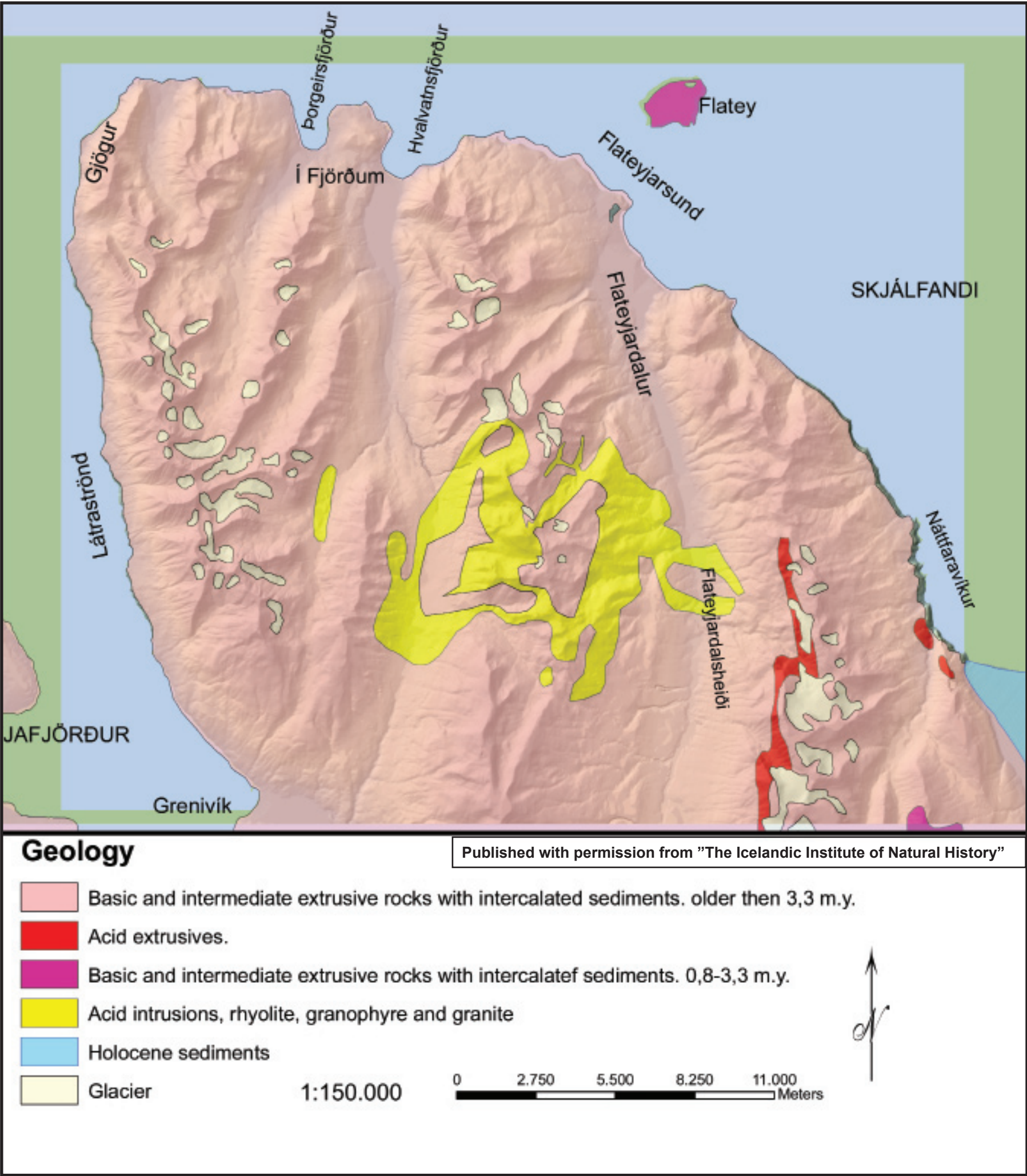
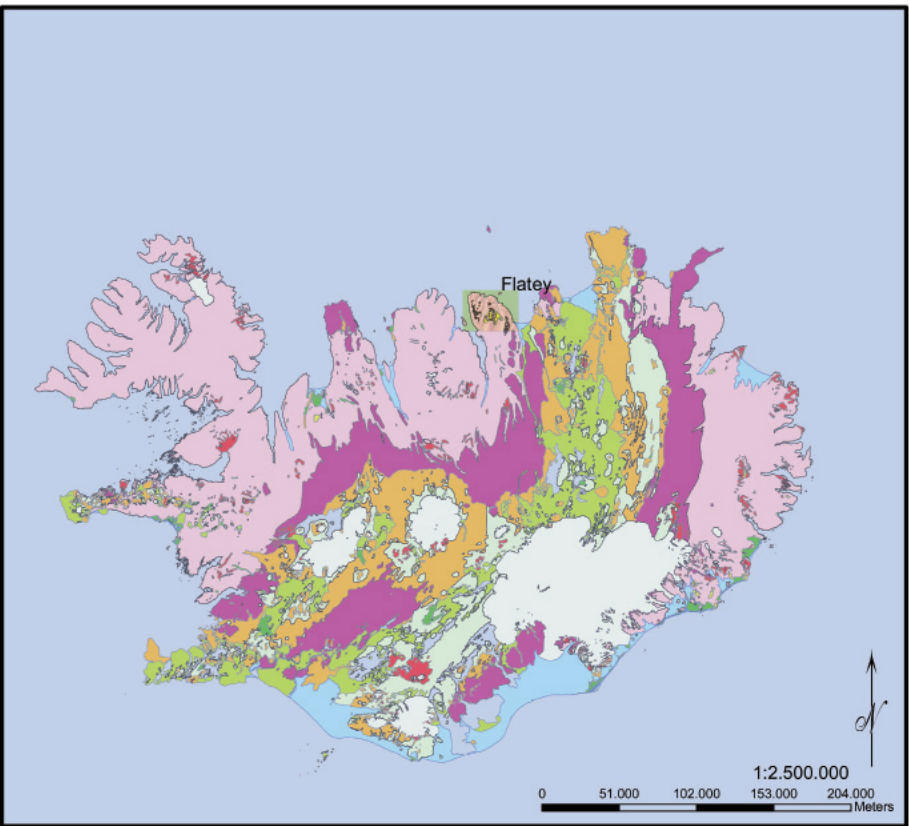
## Introduction

Iceland lies astride the Mid-Atlantic Ridge and is the largest supramarine, integral part of the global mid-oceanic ridge system. Iceland has developed on the Mid-Atlantic Ridge as a landmass between the submarine Reykjanes Ridge to the southwest and the Kolbeinsey Ridge to the north, and has been active during the last 20-25 million years. It has grown by rifting and crust accretion through volcanism along the axial rift zone, the volcanic zones, which in terms of the plate tectonic framework marks the boundary between the Eurasian and North American plates. Accordingly the western part of Iceland, west of the volcanic zones, belongs to the North American plate and the eastern part to the Eurasian plate, with the oldest rocks outcropping in northwest and in eastern Iceland. The rate of spreading is calculated as 1 cm in each direction per year.

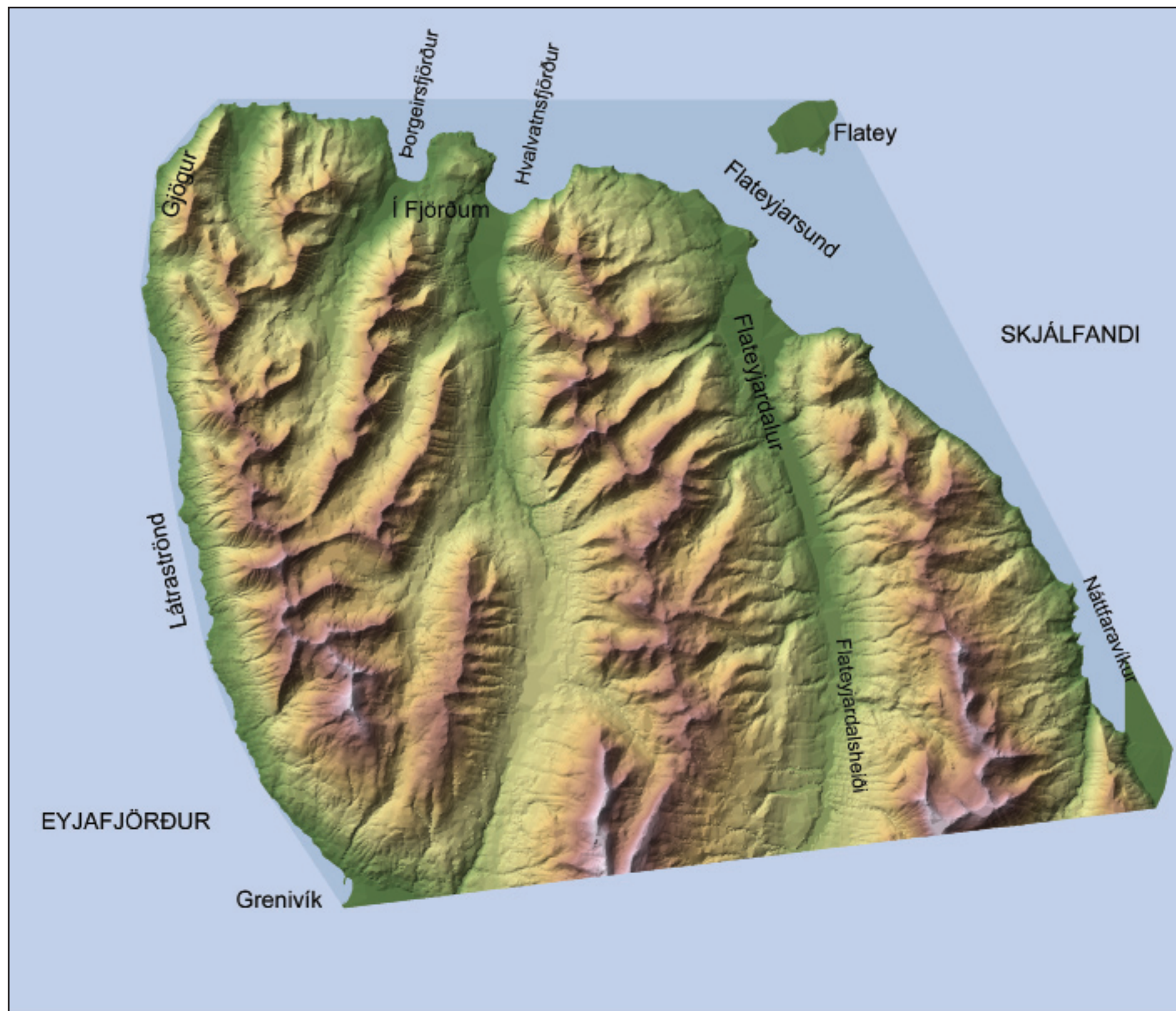
Iceland is built almost exclusively of volcanic rocks, predominantly basalts. Silicic and intermediate rocks - rhyolites, dacites and andesites - constitute about 10% and sediments another 10% of it (The Ministry for Foreign Affairs, 2008).

## Geology in the area

The main part of the area which is dealt with is comprised of very old rock layers, belonging to the North American plate. These are classified as *Basic and intermediate extrusive rocks with intercalated sediments, older then 3,3 million years*. In the middle of the mountain ridge are some *acid intrusions of rhyolite, granophyre and granite*. East of Flateyrdalur are also more *acid intrusions*. Flatey has younger rock layer base but consisting of same type, *Basic and intermediate extrusive rocks with intercalated sediments, 0,8 - 3,3 million years old*. So no considerable difference is between Flatey and the fast land on geological basis.







## TOPOGRAPHY AND CLIMATE

The name Flatey means "flat island" and that describes very well the topography of the island. The highest point only 22 m above sea level and you can see over the whole island from almost every point. The mainland of Flateyjaralur and Fjörður are the complete antipode. The height-difference between highest peak and sea level stretching almost 1200 m with sharp edges and deep valleys. The biggest mountain tops have snow all year round.

The height above sea level therefore becomes a very strong factor in character mapping, especially when determining borders between types/areas.

The climate in Iceland is dry in general, and dryer in North Iceland than South. Annual down birth in Grímsey (an island little further north) is only been 563 mm per year as an average of last 30 years. Average temperature in this area is -4 to -2 °C in January and 8-10 °C in July (The Icelandic weather institute, 2007).

## TOPOGRAPHY AND CLIMATE

1:150 000

0 1 500 3 000 4 500 6 000  
Meters





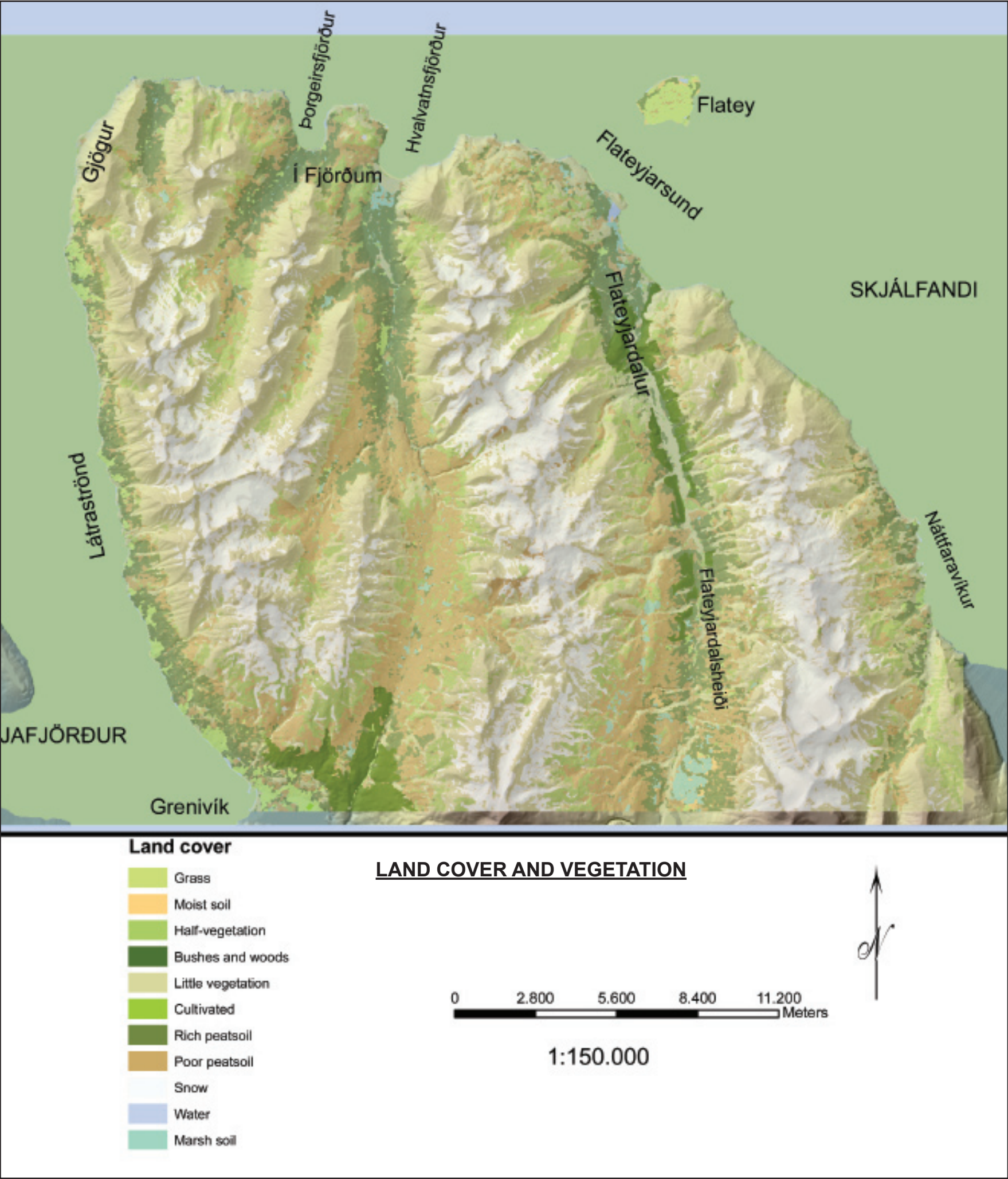
**LAND COVER, VEGETATION AND SOIL**

The lowland at Látraströnd, Fjörður, Flateyjardalur and Flatey has rather strong vegetation, especially in the types of soil that are more wet and fertile. Then again are the mountaintops with little and sensitive vegetation, mostly consisting of crawling or running, low species. Often with long distances between individuals.

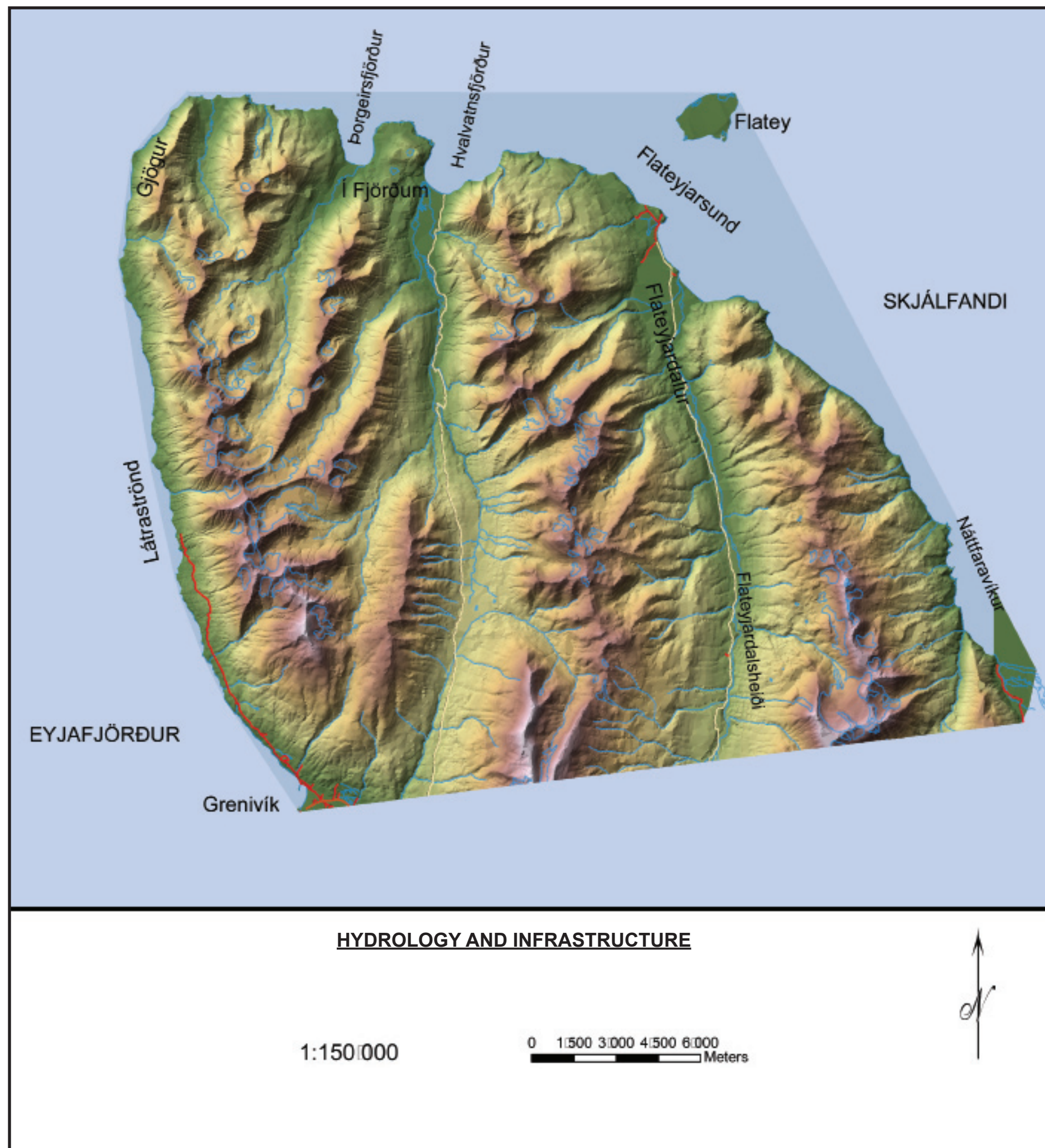
The land cover data is received from a project called "Nytjaland"(www.nytjaland.is), which collects all vegetation and soil data in combined, accumulated data-base. So each category is made of several vegetation-types on different soils, which all have in common to give the same land cover percentage, character of species and harvest (for grazing). That project is made specially to help farmers to organize there grazing systems so overgrazing and erosion can be avoided.

The land cover in the valleys and coasts of the fast land are mainly comprised of *rich peat soil* in the deepest valleys, changing to *poor peatsoil* at more height and then to *little vegetation* up to the snow-line. In Flateyjardalur and north from Grenivík there are some bushy areas and grass areas found spread all around in the fast land.

Flatey has on the other hand *grassland* as main land cover (about 80%) with small zones near the biggest bird-nesting places, where the soil is thicker and more fertile, *rich peat soil*. Vegetation and soil is rather monotonous in the island but more varying on the fast land (Nytjaland, 2008).







## **HYDROLOGY AND INFRASTRUCTURE**

The hydrology system in the area is mainly structured by small creeks and rivers of fresh water. Most of them starting as small springs in the mountains or as run-off water from snow-covers (glaciers) on the top-peaks. Where these rivers reach the lowland they are often quite big and change rapidly in heavy rain or sudden thaw. This is especially difficult for hikers in the area which are many during the summer.

Small spring rivers are also in the area and they have much steadier water level.

The infrastructure of this area is really humble compared to the violent landscape. Flateyrdalur and the valleys north to Hvalvatnsfjörður have summer-roads, made of either gravel or dirt. Marked with yellow on the map. These are only open 2-4 months per year, depending on weather conditions and only for jeeps or bigger cars.

Grenivík is the only densely populated place in that area, with approx. 300 inhabitants. North from Grenivík, on Láttraströnd there is a "all year round" road, marked with red on the map.

Even though inhabitants in most of the area are few, it has to be taken into account that this is near to densely populated areas like Akureyri, Eyjafjörður and Húsavík which have around 28 thousand inhabitants. This area is therefore very popular recreational area for them, especially hikers during summertime but also other sports for example; bird hunters, horse riders, snow-jeeps, snow scooters, kayak etc.



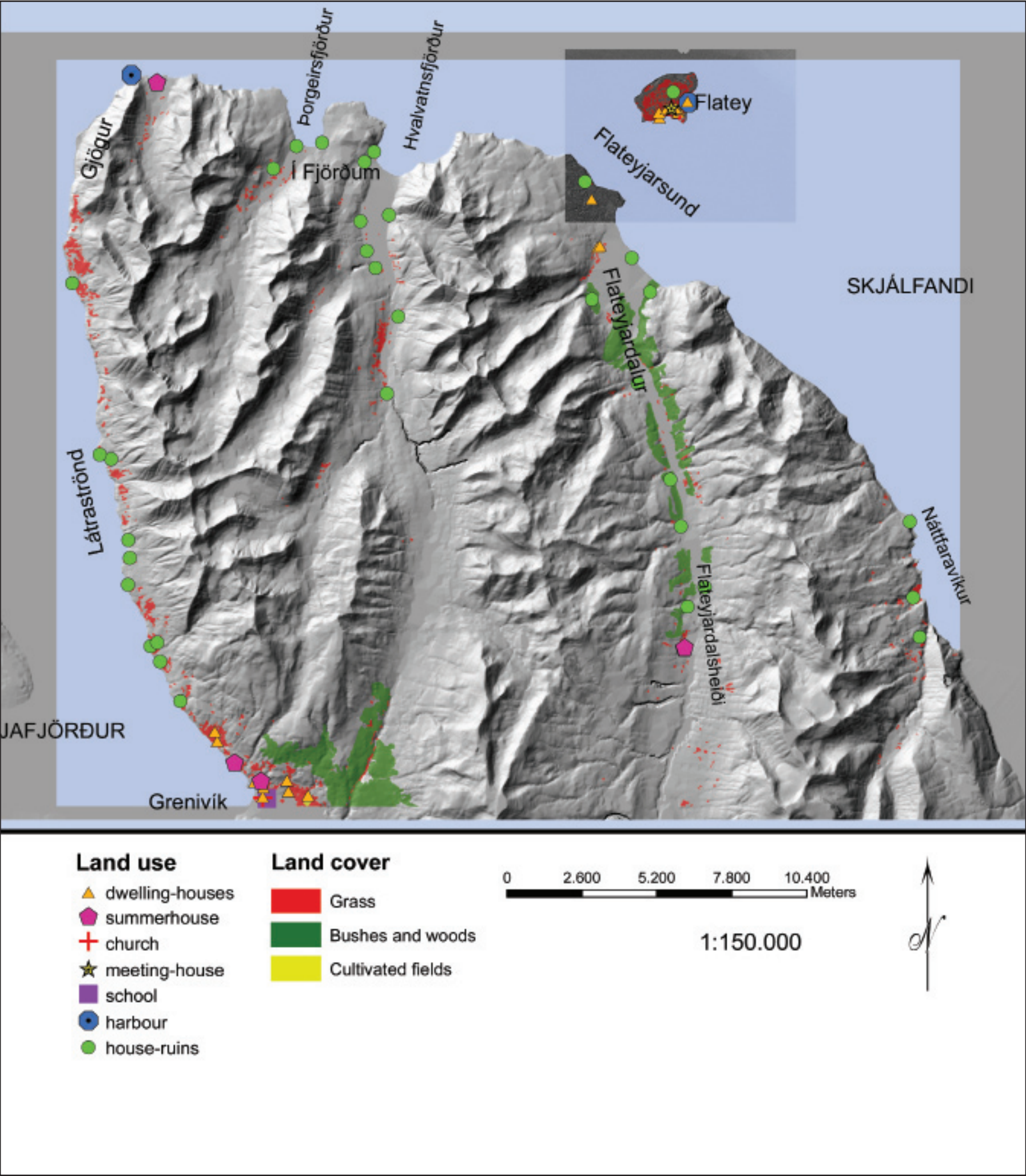
LAND USE AND CULTURAL HISTORY

No cultivated fields are found in the area which suggest that all farming has ceased, except from grazing sheep in summertime.

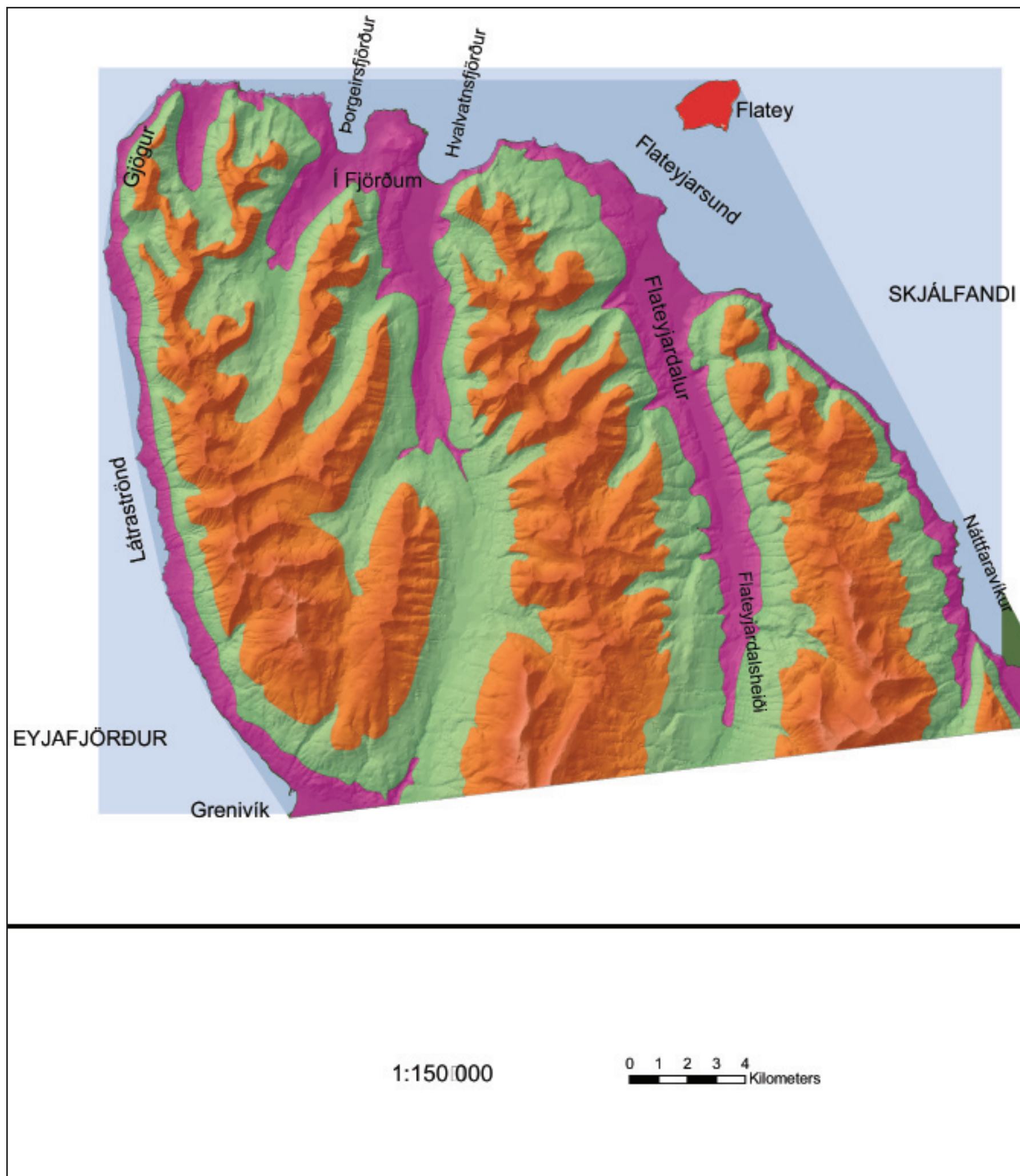
The number of house ruins shows that this was former a prosperous, highly populated area. The location of the former houses (ruins) suggests that the livelihood was mostly gained from sea, since they are often close to another and near the coast. The traditional sheep farming setup was often with further between so the grazing pastures had enough space. Even though harbors are only marked in two places (Gjögur and Flatey) to small, open boats needed only simple landing places which have been washed away today. Sometimes only made of few rocks and a short canal. In this database the category for dwelling houses consist of all concrete houses. The ones in use and good condition, the ones used as summerhouses and the ones that are totally a banded and unfit for habitation.

Summerhouses are few in the project area and that can be said as a strong character, compared to other sparsely populated areas in Iceland. Increased number of them would change the sense of place harshly.

Cultural history of Flatey has been carefully reported earlier and will therefore not be repeated. Except from reminding that the church in Flatey was situated in Flatey-jardalur until year 1953. Then it was taken into pieces, shipped to Flatey and rebuilt there.







## Character types

The whole area of Fjörður, Flateyjardalur and Flatey can be divided into four different character types, where height above sealevel is used as a ground factor to determine the borders between types.



**Mountain type**, >460 meters above sea level. The highest top reaching almost 1200 meters. Small glaciers and snow drifts that do not melt during summers are common on the tops. Mostly sand and rocks with little vegetation, beside from groundlings and creeping species. Sharp mountain edges and tops. Very extreme landscape and fantastic views.

Vast scale and no enclosures. Rough landscape forms, structured by polygons and lines. Movement and sounds based on weather conditions.



**Mountain sides and foothill type**, 160 - 460 meters above sea level. Rocky and sandy hills mixed with marsh areas. Vegetation type is low heath plants, especially on the north sides which are more weather-worn. Variable inclination. Some kind of a transaction-zone between mountains and lowland.

Large scale and half open enclosure. Continuously simple landforms, structured by polygons and lines. Calm movements of vegetation and birdlife. Nature-sounds, mostly wind.



**Lowland type**, < 160 meters above sea level. The strongest character in these areas are the old (mostly deserted) farms. Remains of cultivated fields and fences are often around and many evidence of relics can be found, such as old riding tracks, milestones and marina. The presence of the sea is very dominating factor in experiencing the place. The vegetation is more and often higher than in former character types, but varying species between different soil types and micro-climate within the area. Almost all infrastructure is limited to the lowland.

Scale is large and enclosure is varying from open to semi-closed, but only by large scale mountains. Complexity of landform is diverse, structured by polygons, lines and dots. Movement is calm but constant from the droning sea. Nature-sounds, sea and wind are most prevalent.



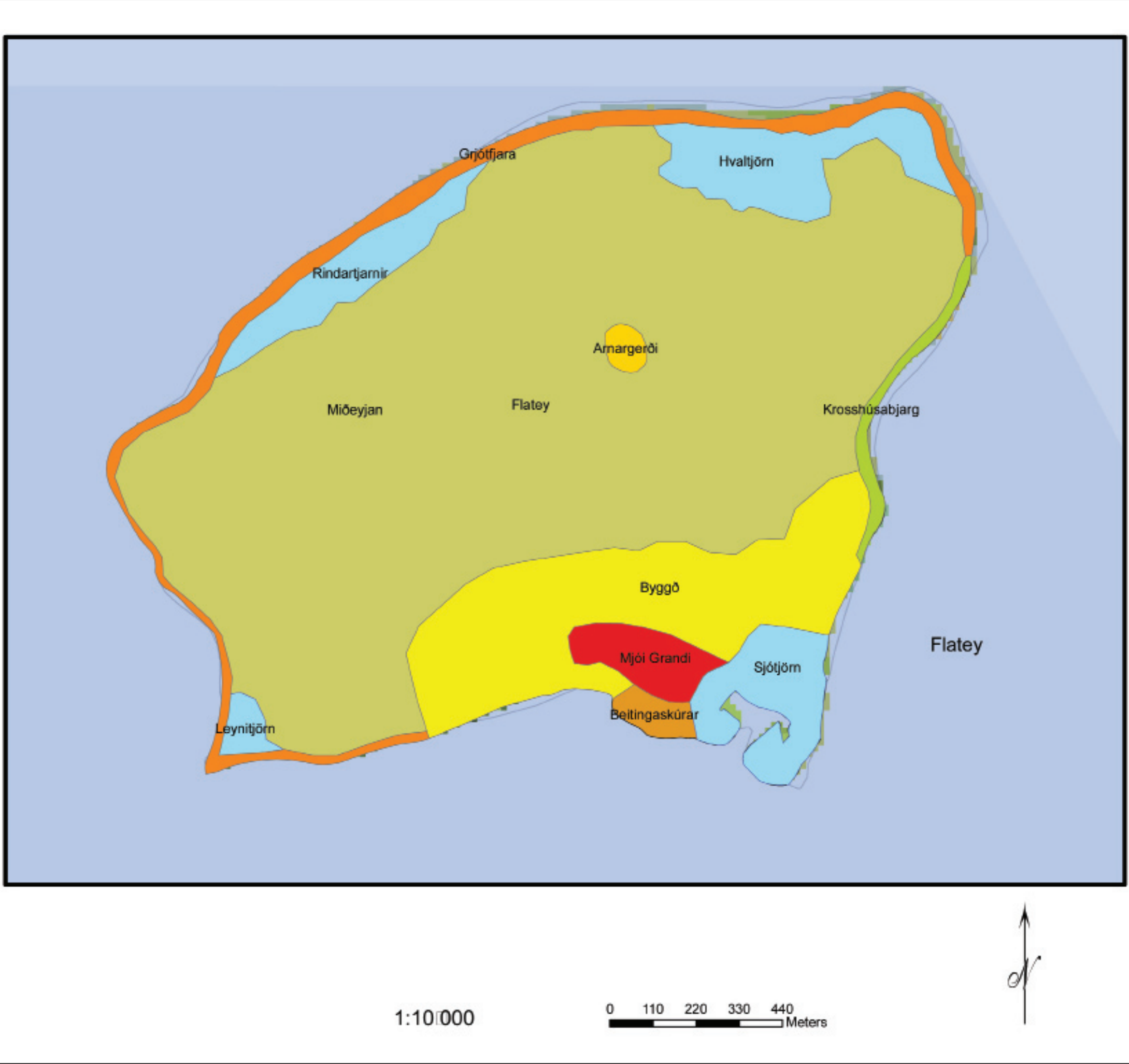
**Flat island type**. Formerly inhabited island with fishermen and farmers. Fertile soil with grass-vegetation. Very exposed to wind from all directions, therefore have wooden plants and more sensitive ones not settled. Despite for grazing domestic animals for the last dozens of years. Rocky shore or small cliffs (<25 m high). Rich in birdlife.

Scale is large and without enclosures. Complexity is simple to diverse landform structured by polygon and dot. Movement and sound are still to calm with constant presence of the sea.

Character areas in Flatey

The Flat island type is found to be off very different character type then the other Character types and there fore chosen to be identified into Character Areas. The island of Flatey was divided into seven different Character Areas, based mostly on vegetation, land use and topography.

- Miðeyjan (Middle island)
- Byggð (Settlement)
- Tjarnir (Sea ponds)
- Grjóttfjara (Rocky shore)
- Krosshúsabjarg (Cliffs)
- Mjóí Grandi (Marsh area)
- Beitningaskúrar (Industrial area)





Character areas of Flatey - descriptions

Based on desk and field study results, the island of Flatey is divided into 7 different character areas. Borders between were determined based on land cover, land use and topography. Each area is presented with key characters and short description, ending with discussions of strategies and recommendations for future development. Evaluation and rank of importance is skipped in this project since its aim is to get an overview for character areas in Flatey, rather than to determine which one is best.

MÍÐEYJAN

**Key characters:** High grass, flat, tussocks.  
**Description:** The land is semi-wet to dry and covered with high grass. It has been changing from agricultural- (before 1967) to natural landscape. Only one time since then, which is known of, was the grass hayed and moved away. The only grazing is from goose, which stay there in big flocks in spring and autumn. The decomposing grass and the prevalence changes between frost and thaw, has made a micro landscape of tussock, which are difficult to walk in. Especially where the grass is so high that you never know if your going to put your foot down in a hole or on a tussock of grass..  
The area is very flat with great views to all directions, even all the way to Grímsey in clear sky. The relics, Arnargerði, is in the middle of the island and is assumed to be remains from 11th century when Stjörnu-Oddi was doing his research of day-length and solstice.  
**Future development:** If the grass vegetation continuous to grow undisturbed the island will get more homogeneous vegetation layer each year. Cutting the grass or grazing with sheep part of the summer should be considered as an option to strive against the grass and to keep the island more open and easy to walk around in. Grazing will keep the grass shorter but also increase some heterogeneity. Planting trees or importing of species should be carefully planned in order to avoid impacting the flat and open character of Flatey.



BYGGÐ

**Key characters:** Scattered houses, disbanded fields. New time meets old.  
**Description:** The houses, built from 1785 to 1947, stand in a curved line, facing south or towards the harbor, with the church standing on the highest point. Most of them have been renovated the last decade and are used as summerhouses. Most of the houses are simple traditional Icelandic one or two storey house. The exception is the two youngest houses, Berg and Sæberg, which are example of ”funkis” houses. Building materials are mostly local and discreet. Car tracks in the grass lead you between the houses and function walking path as well. 3 cars and 2 tractors are on the island.  
Remains of houses and walls made of stone and turf are common there but have not been maintained or preserved and are therefore getting more invisible every year.  
**Future development:** Imported materials, like crushed lava and big sundecks have been added around one house and make a big contrast to other more local materials. Tracks and walking paths do not make big impact today but more vehicle traffic could be treacherous, if not planned for. Building of new houses would threat the character in that way that it is hard to build new houses in the same old building style that is traditional for the island. The houses today are almost all owned by people with blood relations to the former inhabitants which have strong understanding of the history in Flatey and how and why things are like they are today. This needs to be set out and formed in some kind of a vision or guide to prevent next generation from ruining that character. No laws or restriction cover that today. Such law frame for the island would have to be made with locals as part of the consultant team. That would rise up to the set out demands of the European Landscape convention about inhabitants participation in planning processes.





## TJARNIR

**Key characters:** Hidden, borders between grassland and rocky coast, fresh water but no living water bugs or fish.

**Description:** Sheltered from the sea by stone ridges, there are four small ponds on the island. They have mixed water, fresh as base but gets mixed with sea in bad storms. They also freeze down to bottom in winters so these two factors have the impact that no fish or aquatic organism thrives there. When standing by these ponds you can hear the sea-waves rolling the stones back and forth, but not see them, which make the experience of the place special.

The ponds have for hundreds of years been popular playing area for children and specially the one called Leynitjörn (secret pond), which can't be seen from the houses.

The ridge between the sea and the biggest one, Sjótjörn, was dugged away 1967 to make a new more secure harbor. That was done the same year as everyone moved from Flatey.

**Future development:** Today these ponds are peaceful places with this nice mixture of hidden and exposed elements, which should be kept unchanged for visitors to enjoy.



## GRJÓTFJARA

**Key characters:** Round, sanded stones of similar size. Seaweed. Sounds. Vast scale.

**Description:** The sound of the rounded stones rolling back and forth on the shore is effective. The stones are difficult to walk in and have little to no vegetation in between, especially on the north side where the stone ridge is higher and coarser. Seaweed was lying at the shore-bank when the field study was made, but gets washed away in strong winter storms. Feeling for proportions between man and nature is strong when standing by the open North Atlantic Ocean.

**Future development:** Nature has control over changes off coastline and amount of stones piling up and should not be interfered. The stones could be used to build up or rebuild stonefences and embankments.



## KROSSHÚSABJARG

**Key characters:** High cliffs, puffin holes (nests), lighthouse, cairn.

**Description:** The East side of the island has steep cliffs, up to 20 m high. This is were the lighthouse is situated, near the highest point of the island. Right above the rock there are green grass tussocks, with thousand holes with puffin nests. The grass is dark green and nutritious because of the birdshit and therefore the goose graze more there than other parts of the is-land. The stone/rocks in the shore are not so rounded, but more cracked and with sharp edges. This is because the sea current is braking down this side of the island but building up on the other sides.

A big cairn has been built there, partly with concrete. Year of construction not known.

**Future development:** The bank will break down little by little each year and move into the island. This is caused by the puffin, nesting on the bank. The birds dig some new holes each year and take more space further into the bank. Then the nature forces take the sensitive scrabby soil and blow and wash it away. Locals have tried to put big nets over the soil to stop the puffin, at least near the cairn since they have soon digged the foundations away. Some solution needs to be found there.





## MJÓI GRANDI

**Key characters:** Wet marsh area, covered with flowers (summertime). Houses in line all around it.

**Description:** Central of settlement but unfitting for buildings or traffic. The soil is probably more acid there and grass gets a red-ish tinge in autumns, which suggests iron rich soil-molecules. So the vegetation society is a little different than in other part of the island.

This open field gives a certain space character to the settlement, since it makes it hard to develop a center near the harbor, which had probably been the result if this area had been dry.

**Future development:** No special actions needed. This should remain as an open, untouchable center of the settlement. Giving all viewpoints a certain distance to the topic.



## BEITNINGASKÚRAR

**Key characters:** Old concrete pier, former industrial-houses standing tight together.

**Description:** The house remains are used as storage houses for fishing equipments, tractors etc. This area, near the old dock, was where the trading companies and fish storage houses were situated before. So the building of that pier has been vital for the prosperity in the island, when built year 1930.

**Future development:** The concrete pier will always need some maintenance and has already been repaired in few places, by the house owners association. This pier is the strongest single element when looking at the island from distance, along with the church standing on the top. Therefore must it be retained and protected.





## Discussion

The work of these final thesis has aroused many questions, both concerning the project in itself but also off more general kind, especially about the status of Icelandic landscapes.

How can my input be used for planning processes in Iceland?

Is LCA a tool which is helpful in solving problems in depopulated areas and can it be helpful in debates about hydropower projects? Does it have same function as EIA?

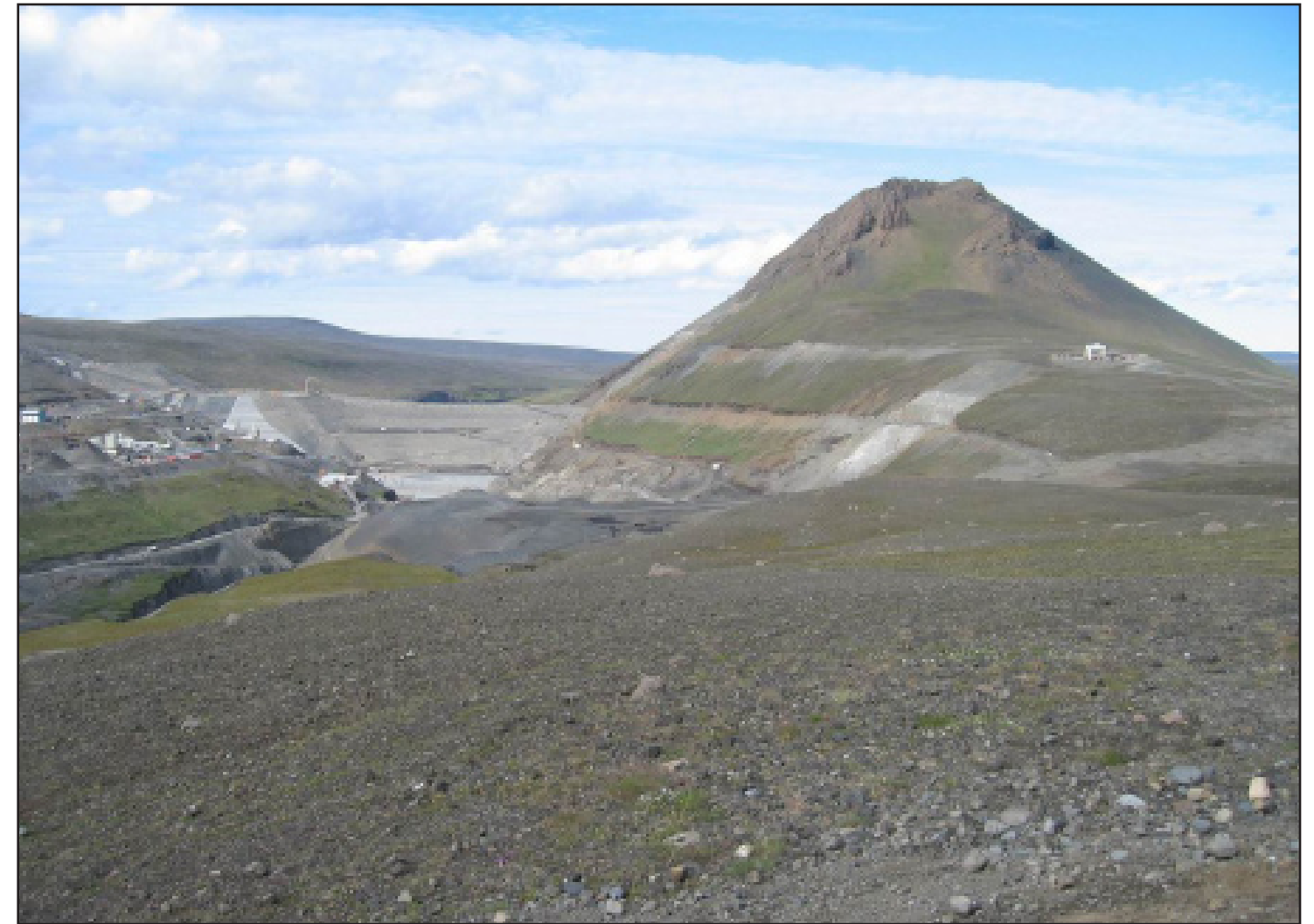
What are the biggest threats for Icelandic character?

All these questions concern Icelandic landscapes, and all are aimed to provoke people to pay attention to the landscape character importance and influence for each and everyone's quality of life. The input of Icelandic Landscape Character Assessment will give important information for development planning policies at both regional and local level. It provides an input for Environmental Assessments, both at the level of plans and policies as well as for the individual development proposals. It is a significance informing work on special areas where working on identification of areas for designation or in justification for special treatment by designation. The character approach should help in accommodating necessary changes which come with development, without sacrificing local character. An overall knowledge and recognition of landscape character importance, among the population of Iceland, will also develop respect for the landscape and its resources. To raise awareness is a big step in all debates and should be significantly crucial when discussing so big topics as landscape.

The depopulated areas of Iceland became quit many in the 60's and 70's, with changes in economy and lifestyle. These areas are found widely and are getting more and more popular the last years as recreational areas, specially for longer hiking and horse riding trips. The attractions in these areas that bring most people there are the peaceful, surrounding, the remains of former settlement and the old stories found under every stone. Guided tours are therefore considered the best way to experience these areas. This is considered as a general fact for most Icelanders, but the guaranty that it will continue to hold that character are not found within Icelandic jurisdiction. Deserted areas are usually refined as "open areas for special use" or "mixed land use" and if looked at explanation text in comprehensive plans, there are often just short paragraphs of possibilities concerning travel industry or even power plant options. This say actually that no decisions have been made and no ideas are clear for the future development of these areas. A Landscape Character Assessment would give the needed base information of weaknesses and strengths of these depopulated areas. What characters are important to preserve and what areas are better fitting for development. The LCA is well functional tool to use when planning at landscape scale, and is easily adapted to all types and sizes of landscape.

LCA is a entirely separate process than Environmental Impact Assessment (EIA) but can be a complementary tool. EIA is a key tool that has the process of compiling, evaluating and presenting all the significant environmental effects of a proposed development in order to assist the local planning authority in considering and determining the planning application. The outputs from LCA make an important contribute to EIA. They can provide baseline description of the landscape as a resource and can contribute to an assessment of the likely impact on that resource if development is carried out.

For the last forty years Icelanders have considered the sheep as being the biggest threat to Icelandic landscape, because it has been allowed to walk freely all over the country and bites the top of almost all sprigs. This has indeed affected vegetation in many areas and still does, but the understanding of landscape has luckily changed over that period. Landscape was former considered only as topography and vegetation and since the sheep changed the growth in so big areas, they were bad in general. The mans actions then again were in so small scale (compared to the sheep) that even though we dug away one small mountain, the impact was never as bad as the influence of grazing herbivorous. This thinking has changed today and the influence of man are indeed the biggest threat to Icelandic Landscapes. The enormity of one hydropower project is so large and permanent that the population of Iceland needs to stand up to protect the land we have borrowed. The sustainability in developments will not be gained unless the influence the man has on nature and its resources is controlled.



## Conclusion

The future is inescapable in landscape, just as much as the past is. Celebrating the past in landscapes does not mean have to go backwards, nor that today character has to be freezed even though it is considered desirable. We need to be careful of the illusion of golden ages, that landscape was once perfect and we have ruined it. Development and changes are a natural process in nature, our job is just to retain the positive parts of the landscape which give it a strong or effective character. Landscape is highly dynamic and ever-changing perception, and that is impossible for this generation to hand it on to the next one in exactly the same condition, therefore we need to accept that change is one of landscape characteristics as well as it has impact on it.

Landscape Character Assessment is an important tool for those involved in influencing the landscape. It can be used to get a spatial and map-based summary of existing knowledge. All examined methods have the same aim - to categorise landscape based on accumulated knowledge of different influencing factors. The main difference between methods lies in how it is carried out and for what level of decision making the output is served. Also there is a essential difference between holistic approaches and sectional ones, where the latter are sub-analysis within the holistic methodology.

Icelandic landscape character needs to be defined and categorised in order to embed landscape consideration into planning processes and development projects. Landscape Character Assessment is an effective tool and well appropriate for Icelandic circumstances.

To compare and examine methods used in other countries is a good way to get a over view of the circumstances in Iceland. Chosing only three methods gives of course just a limited point of view and the propsition of Icelandic Landscape Character Assesment would need to be compared and sized up with other methods before taken into use, for exempel the Norwegian or Dutch methodology. So instead of having a ”ready-to-use” method after this thesis work the outcome is more in having the main questions ready for future development of the methodolgy based on Icelandic landscapes.

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## Appendix A

Field study papers - checklist for landscape elements

<b>Landscape character mapping and valuation</b>	
Landscape Character Area:	Date:
Landscape Character Type:	Photo nr.:
Coordinates:	Person:
<b>Character-giving landscape elements (descriptions)</b>	
Land cover-forms	
Geology:	
Terrain:	
Water-elements:	
Land use and landscape elements	
Vegetation	
Forest/plant age:	
Small plantation/bushes/ "lyng":	
Living hedgerows/road tree/shrub:	
Stage of cultivation	
Agriculture: fulltime/part-time/ leisure-time:	
Mixed agriculture/nature:	

Nature/self-culture:	
Settlement-pattern	
Høstborg/kaupstaður:	
Kauptún/þorp:	
Industrial areas:	
Farm:	
"Sei"	
Leisure-house-area:	
Other:	
Culture historic pattern and elements	
Rural/sub-urban/urban:	
pristine/ (agri) cultural /urbane:	
Area with a lot of histories:	
Technical inputs and elements	
Roads (how big):	
Power lines:	
Radio transmitter:	
Mast/towers/windmills:	
other:	

Other land use factors	
Planned for urban development:	
Mines:	
Airports:	
Recreational areas:	
Other:	
Architecture (note condition/quality)	
Local materials (stone/soil type, colour, texture etc.):	
Combinations (fence/door, etc.):	
Vernacular style (window style/roof pitch/ style):	
Settlement form:	

## Appendix B

Field study papers - checklist for aesthetic and perceptual factors

- observations of condition, sensitivity and management

<b>Topography:</b>		
Flat	plain	dry valley
Undulating	rolling lowland	broad valley
rolling	plateau	narrow valley
steep	scarp/cliffs	
vertical	hills	
<b>Short description of key-characters and dominant sub-areas, strong elements and visual aspect:</b> <hr/> <hr/> <hr/> <hr/> <hr/>		
Borders: _____		
Key characters: _____		
Landscape character cultural-historic origin: _____		

Visual analysis				
<b>Scale</b>	Intimate	Small	Large	Vast
<b>Enclosure</b>	Tight	Enclosed	Open	Exposed
<b>Diversity</b>	Uniform	Simple	Diverse	Complex
<b>Texture</b>	Smooth	Textured	Rough	Very rough
<b>Form (3 dimensional)</b>	Vertical	Sloping	Rolling	Horizontal
<b>Line</b>	Straight	Angular	Curved	Sinuous
<b>Colour</b>	Monochrome	Muted	Colourful	Gleish
<b>Balance</b>	Harmonious	Balanced	Discordant	Chaotic
<b>Movement</b>	Dead	Still	Calm	Busy
<b>Pattern (2 dimensional)</b>	Random	Organised	Regular	Framed
<b>Visual dynamic</b>	Sweeping	spreading	dispersed	channelled
<b>Perception</b>				
<b>Security</b>	Intimate	comfortable	safe	unsettling
<b>Stimulus</b>	monotonous	bland	interesting	challenging
<b>Tranquillity</b>	inaccessible	remote	vacant	peaceful
<b>Pleasure</b>	unpleasant	pleasant	attractive	beautiful
				breathtaking

Landscape character condition			
Time-depth of landscape character (years)	0-50	0-200	>200
Landscape character condition(due to cultural-historic origin)	Good	Middel	Bad
Retention condition of character elements	Good	Middel	Bad
Retention condition of experience possibilities	Good	Middel	Bad
<b>Key functions (to hold on to the character):</b> <hr/> <hr/> <hr/>			
<b>Actions to strengthen the character:</b> <hr/> <hr/> <hr/>			

